BRITISH MEDICAL JOURNAL:

BEING THE JOURNAL OF THE BRITISH MEDICAL ASSOCIATION.

EDITED BY ANDREW WYNTER, M.D.

No. LIX.] LONDON: SATURDAY, FEBRUARY 13, 1858. [NEW SERIES.

Illustrations OF HOSPITAL PRACTICE:

METROPOLITAN AND PROVINCIAL.

GUY'S HOSPITAL.

POLYPUS OF THE PHARYNX AND NOSE, EXTENDING INTO THE CHEEK: HÆMORRHAGES FROM SLOUGHING OF THE GROWTH: DELIGATION OF THE COMMON CAROTID ARTERY: ARREST OF THE GROWTH: RETURN OF ACTIVE GROWTH: HÆMORRHAGES: SLOUGHING OF THE GROWTH: ARREST OF ITS DEVELOPMENT.

By JOHN BIRKETT, Esq., Surgeon to the Hospital.

APROPOS of fibrous polypous growths, developed at the base of the skull, and in the adjoining regions, the following case shows many points of great practical interest.

A somewhat strumous but otherwise healthy-looking boy, thirteen years of age, first came under my observation in December 1851. He then was suffering with polypus at the posterior nares and in the pharynx, which caused a stoppage of the nares, and which fact was first observed about February of the same year. The growth pushed forwards the soft palate, could be easily seen when the velum and uvula were raised, and with the index finger could be traced to its attachments. Whilst in the Hospital he had bleeding from the nose and mouth; the polypus sloughed off, and he was discharged.

The left cheek was at this time rather swollen, which was first noticed about November 1851. In August 1852 the boy was again admitted into Guy's Hospital. The cheek was very much more swollen, and a well defined new growth could be felt in its walls, merely covered by the mucous membrane. In order to enucleate this, I divided the upper lip to the ala nasi, incised the mucous membrane over the tumour, and removed it. The wound healed rapidly, and for a time the patient seemed well. About October and November 1852, hæmorrhages again commenced, and they continued until December 22nd, when I secured the left common carotid artery at the usual place. Some time before this the tumour had reappeared in the left cheek, accompanied with a pulsating, thrilling movement, which led to the supposition that an aneurismal tumour had been developed. When the operation was performed, the boy appeared to have lost almost the last drop of blood. However, after losing all power of voluntary movement on the right side of the body, which he subsequently recovered, he left the hospital in February 1853, sixty-eight days after the operation, well, although weak.

He continued to improve in general health until the middle of March 1853, when hæmorrhage again took place from the left nostril. This was the first bleeding since the operation of securing the carotid artery. To the end of this month profuse hæmorrhages repeatedly occurred, and large pieces of the new growth were ejected by the mouth, which were more or less gangrenous. From these causes he became again so extremely exsanguine and anæmic, that we despaired of saving him, although all measures tending to arrest bleeding were energetically pursued.

After March 26th the hæmorrhage ceased; the cheek, however, enlarged, became inflamed, and ulcerated inside through the cicatrix, which resulted from the incision I made there some months before. Offensive pus and sloughs continued to escape therefrom for several months; but during this time the lad gained health and strength.

In March 1855 this sinus continued to discharge offensive pus, and he came again into the Hospital. I now proposed excision of the superior maxillary bone as the only measure whereby to reach the origin and root of the new growth; for it was quite evident that the growth was of an innocent nature. To this the parents demurred, and removed their boy from the Hospital.

Mr. F. A. Crisp, of Walworth, very kindly looked after this patient, and he has lately (January 1858) informed me that he is quite well, has grown up a strong, robust young man; that the tumour has entirely disappeared, and the sinus in the cheek healed.

REMARKS. This is but a brief outline of a case which, under its varied aspects, was attended with great anxiety as well as interest, and in which the measures adopted and those recommended must be regarded as immediately necessary to meet the exigencies of the case. The fortunate issue of this case does not in any way militate against the performance of an operation so absolutely necessary, in some patients, as excision of the superior maxillary bone in order to reach the root of the growth, and effectually remove it.

UNIVERSITY COLLEGE HOSPITAL.

HYDRARTHROSIS OF THE RIGHT KNEE HEALED BY TAPPING AND INJECTING THE JOINT WITH IODINE.

Under the care of JOHN E. ERICHSEN, Esq.

[*Reported by* FRED. B. JESSETT, Esq., *House-Surgeon.*]

WILLIAM —, aged 61, married, a laundryman, was admitted into University College Hospital, November 24th, 1857. The patient states that he has never had any venereal disease. About six years ago, he had a slight attack of rheumatism in the shoulders, and since then he has had slight attacks from time to time, otherwise he has always enjoyed good health. About two years ago, while wheeling a truck of linen, his foot slipped, and he fell on to his right knee, but the injury was not severe enough to incapacitate him from continuing his journey; after this accident, the knee gradually became more painful and swollen until ten months after, when he was obliged to give up his work. About three months after the fall, he went to an hospital, where he had the knee blistered and then painted with compound tincture of iodine. He continued this treatment for three weeks, after which it was tapped, and about a half-pint of fluid drawn off; a blister was then applied, and repeated seven times; this treatment, the man says, made him much worse, so much so, indeed, that two months after the commencement of the treatment he could not stand; then he went to the workhouse, where he was cupped on each side of the joint, which he says did him "a deal of good;" about fourteen ounces of fluid were withdrawn, the joint was much reduced in size, and the pain diminished; since this time, he has been able to walk pretty well.

Dec. 2nd. Since his admission, the patient has enjoyed good health. Mr. Erichsen introduced a trocar and canula into the knee-joint and withdrew six ounces of fluid of an amber colour, and then injected a drachm of compound tincture of iodine, which was left in the joint. A straight splint was applied to the back of the leg.

Dec. 3rd. He complains of much pain and tension in the joint, but there is not more inflammation than necessarily follows the introduction of the iodine.

Dec. 5th. The pain and tension continue much the same.

Dec. 7th. An evaporating lotion is applied to the joint to-day in consequence of the pain and tension continuing, and a leather splint posteriorly.

Dec. 12th. The lotion is discontinued; the man expresses himself much easier.

Dec. 15th. The patient is improving; the knee-joint gives the man very little pain now.

Dec. 20th. The patient is so much improved that he is allowed to get out of bed and get about the ward with crutches.

The splint was kept on; the patient continued to improve

in health and strength daily, and on Jan. 16th, he was discharged.

Remarks. This case is of interest inasmuch as it is, we believe, the first time the injection of iodine into the knee-joint has been practised in this country; but in France this appears to be a common practice for the cure of hydrarthrosis, and according to the French surgeons, it has never been followed by any bad effects, and in many cases a complete cure has been effected without anchylosis. In the present case, the patient never had a bad symptom, and he left the hospital seven weeks after the operation, without any sign of the fluid reaccumulating, and with a joint which he could use as well as ever. The operation is, of course, only admissible where there is no inflammation alr eady existing in the joint.

KING'S COLLEGE HOSPITAL.

PARAPLEGIA FROM CANCER OF THE SPINE.

Under the care of Dr. Todd.

[*From Notes by* Dr. Whitford, *Resident Medical Officer.*]

George C., aged 50, a man of healthy appearance, was admitted under Dr. Todd's care on December 31st, 1857, on account of paraplegia. He had lived temperately, and never suffered from venereal disease. Six weeks before admission, he had experienced great pain in the right calf and back of the thigh. There was no cramp. He lay up for a day or two, and then felt so much better that he resumed his work as a gardener. The pain, however, still continued, though not so severe, and in a fortnight shifted from the right to the left leg. About three weeks from the commencement of the attack, he found that he had entirely lost power in the legs. The pain had abated, but the legs felt numb. A fortnight before admission, the motions began to be passed involuntarily; and, in a week after this, the urine began to dribble away, so that he was obliged to have a catheter passed daily.

On admission, it was found that he had lost the power of voluntary motion in both lower extremities, and that he had partially lost sensation as high as the umbilicus. Reflex movements could be excited by stimulating the skin of the feet and legs; and this phenomenon was more marked on the left than the right side. There were occasional involuntary twitchings in the left leg. The muscles of both limbs were completely relaxed, but they could be excited to a slight degree of tension (reflex) by firm pressure. The diagnosis given was active softening of the cord, principally involving the antero-lateral columns, but affecting also the posterior.

He was placed on a water bed, as a sore was beginning to form over the sacrum; and was ordered to take three grains of blue pill, with three of soap and opium pill, three times a day. The urine was at first acid, but soon became ammoniacal and alkaline from decomposition.

He continued to grow weaker and weaker from the time of his admission, lost his healthy appearance, and became hectic; but there was no sign of any marked alteration till January 15th, when a great change came over him, and it became evident that the muscles of respiration were becoming involved, the extraordinary muscles of inspiration being thrown into violent action, the lower intercostals paralysed, and the abdominal walls rising and sinking with the action of the diaphragm. The countenance became sunken and bathed in sweat, and he died next day.

On *post mortem* examination, the spinal cord was found softened from the fourth to the eighth dorsal vertebræ. Both columns were involved, but principally the antero-lateral, which were easily washed away by a slight stream of water. Pus was found between the dura mater and posterior surfaces of the bodies of the lower dorsal vertebræ; and the body of the twelfth was affected with caries. On the front of the column, from the third to the sixth dorsal vertebra, was a mass of malignant disease; and another similar mass extended from the eleventh dorsal to the first lumbar. The bronchial glands were much enlarged, and contained cancerous deposit. Large masses of encephaloid matter were deposited in the liver.

On microscopical examination of the softened portion of the cord, it was found to contain large cells with fatty contents, compound nerve-vesicles, granular cells (apparently products of inflammation), and some large compound cells somewhat resembling those found in malignant disease. The resemblance, however, was not sufficiently decided to allow of any confident opinion as to whether the softening of the cord had been produced by malignant disease or simple inflammation. In the tumours, the cancerous structure was well marked.

ST. BARTHOLOMEW'S HOSPITAL.

WOUND OF THE ABDOMINAL PARIETES BY A POINTED PIECE OF WOOD BETWEEN THREE AND FOUR INCHES LONG AND HALF AN INCH WIDE: ITS PRESENCE IN THE WOUND NOT DISCOVERED TILL THE EIGHTH DAY.

Under the care of W. Lawrence, Esq.

[*From Notes by* W. Chippendale, Esq., *House-Surgeon.*]

Mary Ann F., aged 13, a young girl of ruddy countenance, was admitted into Queen's Ward, Sept. 20th, 1856. It appeared that she had been gathering elder-berries in the country, and, when in the tree, a bough broke, and she fell, the broken end grazing and injuring her abdomen. She was taken to a surgeon after a time, and recommended to be brought to the Hospital. The accident occurred on the day before admission.

On examining the abdomen, there was a wound at the lower part on the right side, about as large as a sixpence: this did not apparently extend deeply. Proceeding from this was a graze extending some distance upwards, besides a smaller one near. There was redness along the edges of the wound and the graze. The abdominal wall on the left side was tense, and exceedingly tender both to slight and deep pressure. There was also some slight fulness. The right side was softer, and pretty tolerant of pressure. The face was flushed; the tongue was covered with a thick creamy fur on the dorsum, red and moist at the tip and edges; pulse moderate, volume sharp but compressible. There was considerable heat of skin. Low diet was prescribed; she was ordered to have twelve leeches applied to the abdomen, to take acetate of ammonia with camphor mixture twice a day, and two grains of calomel with a quarter of a grain of opium every six hours.

September 21st. The leeches drew well, and she felt easier for them. There is still remaining, however, considerable tenderness and fulness about the left side of the abdomen. Pulse less sharp; tongue furred. She appears more comfortable.

September 22nd. She appears better in herself. The tongue is becoming much cleaner; the pulse is moderate in volume, and has lost its sharpness; the bowels are confined; the abdomen is much the same. A common enema was given.

September 24th. The enema relieved the bowels freely. She is very much better, and, in fact, looks to have but little the matter with her. On examining the abdomen, there is still some tenderness about the left side; and the muscles contract, and make the parts tense on pressure. There is, however, a firm lump, apparently about the region of the descending colon, as if impacted fæces.

September 28th. She appears very comfortable. Tongue clean; pulse natural. On examining the abdomen, a little suppuration was noticed about the wound; and, on feeling the lump, a sharp point was detected; and, examining very particularly, it appeared as if it was a piece of wood with a sharp point. The wound was therefore enlarged with a pointed bistoury, and the end was found. Some traction was made; but the foreign body did not come readily, and pain was produced. It was thought advisable, therefore, to desist, rather than produce any fresh mischief.

September 29th. She appears none the worse for yesterday's proceeding; and Mr. Lawrence, having seen her, enlarged the wound slightly, and, with a little manipulation, extracted a piece of elder-wood, three or four inches long and half an inch wide, with a sharp point, which had run up in the abdominal wall among the muscular tissues.

October 3rd. She has progressed very favourably. There is no fresh irritation.

Original Communications.

CASE OF EXTRAUTERINE FŒTATION.

By W. F. Favell, Esq., Sheffield.

On Friday evening, January 15th, 1858, I was summoned to attend Mrs. ——, aged 37, the mother of three children, who was stated to be suffering from sickness, with considerable pain in the belly. I found, on my arrival, that she had been in her usual health all day up to 4 o'clock P.M., when she began to complain of pain, which was speedily followed by vomiting. She had been engaged during the day in assisting in the

removal of her furniture to another house; and, according to her husband's account, being a somewhat delicate woman, it was thought that the exertion consequent on their removal had induced this attack. She was not then in a condition to excite any serious apprehensions. Her pulse was good in volume, somewhat accelerated; the abdomen was slightly tender on pressure; and the pain she described as being intermitting and very severe. She had also occasional vomiting. On inquiry, I found she had not menstruated for nine weeks. The treatment consisted in the exhibition of opium with small doses of calomel; a mixture containing hydrocyanic acid; and hot fomentations to the body.

When seen by my father, about eleven o'clock on the following morning, she said she was decidedly better; the pain was considerably relieved; but sickness had continued at intervals during the night. The pulse continued tolerably good; and she expressed an opinion that if she had something to allay the sickness, she could be removed in a cab. Shortly before two o'clock, her husband came down in great haste, to say that she had been taken much worse about an hour previously, and her friends thought she was dying. On my arrival, I found that it was so. The sickness had ceased, and the pain become greatly aggravated about twelve o'clock; she was alarmingly faint; her extremities were cold; her pulse scarcely perceptible; and though brandy and other stimulants were freely administered, she died in about an hour after my arrival. The impression on our minds was, that she had died from perforation of the stomach or bowel.

A *post-mortem* examination was made the following day. On opening the abdomen, several pounds of extravasated blood were found in the cavity of the peritoneum, an immense clot filling the pelvis and extending into the abdomen on the right side. The stomach and bowels were distended with flatus and healthy. After removing the clots, the uterus and appendages were examined, when the cause of the hæmorrhage became at once apparent, viz., the existence of extrauterine fœtation in the right Fallopian tube. The cyst had been developed in the tube close to the fimbriated extremity, which was dilated sufficiently to allow the passage of the end of the little finger, and plugged with coagulum. A rent existed in the cyst just within the tube, and the membranes entire, with a small fœtus floating in them, still remained in the cyst, surrounded with coagulated blood. The uterus was considerably larger than in the usual unimpregnated condition. The other organs were healthy, with the exception of the right kidney, which had undergone thorough scrofulous degeneration, consisting of nothing but cavities filled with scrofulous pus, the substance of the organ having been totally destroyed. The ureter was large and thickened, and was blocked up in its whole length with cheesy matter.

Remarks. This case is one of great interest, not only on account of the rare occurrence of the mischief which caused death, but as illustrating how serious an amount of local disease may exist, with very trifling constitutional disturbance; for so little had she suffered from the disorganisation that was going on in the kidney, that (though, as her husband expressed it, "being somewhat delicate") she had been in the enjoyment of what she considered good health, and never had any symptoms which made it necessary to consult her usual medical attendant.

SPONTANEOUS EVOLUTION IN A CASE OF ARM PRESENTATION.

By Charles Young, Esq., Surgeon, Chilton Polden.

The following case illustrates the opinion of Denman and others, that the change in position which occasionally takes place in presentations of the upper extremity, by means of which the child is expelled without manual interference, and which is termed "spontaneous evolution", is in reality a doubling and expulsion produced by the continuance of uterine contractions.

Case. About three weeks previously to her confinement, Mrs. H., aged 30, pregnant with her second child, received an accidental blow in the abdomen by falling against a chair. This caused considerable pain; she did not afterwards perceive the movements of the child *in utero*, and felt a coldness and weight in the abdomen.

I was first called to visit her at 11 a.m. on the 4th instant. She had then been in pain for three hours; and the waters were discharged, together with a little dark coloured blood, a few minutes previous to my arrival. The pains were very feeble; and, on examination, I found that the os uteri would scarcely admit the point of my finger, and was high up towards the promontory of the sacrum. Concluding from these circumstances that the labour would be a protracted one, I left her, and directed the nurse to send for me when the pains became strong and regular.

I was not summoned until 6 a.m. the following morning. The uterus was then acting powerfully; the passages were thoroughly dilated; and the child's arm was in the vagina; and, directly afterwards, the hand itself protruded from the os externum, and its flaccid feel indicated that the child was dead. With the hope of quieting the action of the uterus, which rendered turning impossible, I gave forty minims of tincture of opium. The pains, nevertheless, continued; the child gradually descended; and, in about three-quarters of an hour, the breech and one arm were expelled together, and the remainder of the body followed without difficulty.

I may remark, that the child was not quite mature; its *death* was, in all probability, caused by the fall which my patient suffered three weeks before her confinement, and perhaps from separation of the placenta: hence the dark coloured blood which accompanied the liquor amnii, although no hæmorrhage appeared externally at the time of the accident. Labour occurred about ten days before the expiration of the ninth month; consequently, the child was at the eighth month of gestation at the time of its death. Being immature, and decomposition having begun, it was doubtless expelled more readily than a full grown and living fœtus would have been; but the mechanism of its expulsion would be similar, although, in the great majority of such cases, delivery is not to be looked or hoped for without the operation of turning, and that, if possible, before the membranes have been ruptured spontaneously.

ON THE MORTALITY OF INFANTS IN FOUNDLING INSTITUTIONS, AND GENERALLY, AS INFLUENCED BY THE ABSENCE OF BREAST-MILK.

By C. H. F. Routh, M.D., Physician to the Samaritan Free Hospital for Women and Children; late Physician to the St. Pancras Royal Dispensary; etc.

Part II.

[*Continued from page* 105.]

Physical Qualifications. The physical qualifications of a wet nurse may be summed up under the following heads:—

1. That she has good milk.
2. Hereditary predisposition good.
3. Age not to exceed 30.
4. She should not have been confined many months before the child's mother.
5. She should be of the melancholic temperament.
6. She should have not only good quality, but a sufficient quantity of milk.
7. When a wet nurse cannot be given to a child exclusively, a married woman suckling another child may be employed as an adjuvant.

1. *She should have good milk.* This point is best treated in the consideration of what are the characters of good human milk. One of the best evidences of a wet nurse's good physical constitution, is the secretion of an abundance of healthy and nutritious milk. Good human milk has an average specific gravity of 1032, varying from 1030 to 1034. It is always strongly alkaline; this alkalinity it usually retains from five to six days, when it becomes acid. To the taste it is sweet, much more so than cow's milk. When allowed to stand, it will be seen to separate into two portions. The superficial very white substance, known familiarly as *cream*, is nothing else than the oil-globules which, being of a lower specific gravity than the other portions of the milk, rise to the surface. The more transparent subjacent liquid is the *casein*, sugar, and milk. The agitation of the cream breaks asunder the oil-globules, which in this state constitute butter. If the milk, after the cream has separated from it, be kept any time, the sugar contained in it becomes converted into lactic acid, which gradually precipitates the casein as a curd. Rennet, or the mucous membrane of the stomach, and most acids, have the same effect. The fluid which now remains, technically called whey, contains, still in solution, a large quantity of sugar and he salts of milk, which are readily separated by evaporation.

t

When looked at through the microscope, milk is found to consist of a colourless fluid, in which are floating a number of bodies—(*a*) Oil-globules similar to those found in all parts of the body. (*b*) The proper milk-globules, smaller in size, varying from 1-95,000th to 1-7,000th of an inch. These also appear to be oil-globules, from the fact that they reflect light strongly; but they are evidently covered with something else as a layer, from the difficulty of dissolving them in ether. (*c*) There are a great multitude of small granules, or granulated corpuscles, floating in amongst the milk of globules most abundant in milk secreted at a very early period. The *liquor lactis* holds in solution the casein, though some observers believe that the external layer of the milk-globules is made up of casein.

According to the latest analyses by Becquerel and Rodier, the composition of human milk may be stated as follows:—

	Mean.	Maximum.	Minimum.
Specific gravity . . .	1032.67 ..	1046.48 ..	1025.61
Water	889.08 ..	999.98 ..	832.30
Solid constituents .	110.92 ..	147.70 ..	83.33
Sugar	43.64 ..	59.55 ..	25.22
Casein and extractive matters . .	39.24 ..	70.92 ..	19.32
Butter	24.66 ..	56.42 ..	6.66
Salts by incineration	1.38 ..	3.38 ..	.55
	1000.00	1000.00	1000.00

It will be seen that the extreme limits exhibit a very marked difference, and thus point at the difficulty of always accurately making a good selection of a wet nurse.

2. *Hereditary Predisposition.* In the inquiry made as to the hereditary predisposition of a wet nurse, the greatest care is required. It is usually the custom to reject those affected with taint of consumption or tubercular disease, and syphilis. The great extent to which the former of these diseases prevails may be gathered from the fact that the proportion of deaths from it, to 1000 deaths from all diseases, is 154·5 for males, 172·3 for females, and 163·4 for all persons. Syphilis is not generally fatal, but, in its consequences upon the life of a child, is very deplorable. It is known that a woman thus tainted will consecutively bring forth still-born children, or be constantly miscarrying; but it is not generally known, or at least enforced, that even the healthiest children will, if they partake of this milk, gradually become atrophied, and die. Simon mentions a case of a young woman who contracted this disease after the birth of her first child, and who, in consequence of improper medical treatment, carried the disease about her for years. Her children continued pretty well till they reached the age of six months, then became highly scrofulous, and died in a state of general marasmus; and yet this woman's milk, when analysed, appeared to be quite healthy, and even rich. Donné, from several examinations of the milk of syphilitic women, concluded that no difference could be found in either the chemical or microscopical characters of such milk. Meggenhofen, however, found that it was *acid* in reaction.

I think, however, that sufficient caution is not usually given in the case of cancer. It has been said, that of late years cancer has been on the increase. Thus, the deaths amount to 14·3 for all persons per 1000 annually; but the proportion of women singly is greater than that of men, being 20·5 for the former, against 8·5 for the latter. The disease is known to be hereditary; and therefore is it necessary to be doubly cautious in making a selection, where any blood relative of the patient has laboured under the malady. What is true of cancer I would equally apply to insanity. This is also an hereditary disease, and one which, even if not actually transmitted as insanity, is in analogous, albeit milder, affections. Extraordinary peculiarities, eccentricities, strong dispositions to crime or sexual indulgences, more frequently a deficiency in intellectual power, are apt to follow—evils greatly to be deplored, and, if practicable, to be avoided.

3. *The age of a nurse should not exceed thirty.* I would further venture to state that it should not be much under twenty-five. I have already shown elsewhere that the age of the highest sexual development in a female is twenty-six, at which age she is in the best condition to fulfil her maternal duties. After thirty this power deteriorates; and before twenty-five she can scarcely be said to have completely recovered that physical health, which has been weakened during the progress of puberty and the changed position which she has been made to occupy in society. It is but right to add, however, that we do not find the milk itself very much altered, chemically or microscopically, between the ages of fifteen and forty. Still, at the extremities of the scale, the differences are obvious. In the very young, the butter, casein, and solid matters generally, are on the increase; excepting the sugar, which exists in diminished quantity. In the older women, there is a larger proportion of water and sugar; the amount of butter and casein is diminished, although the latter is still in excess, as compared with the normal condition;—from which it may be inferred, that the milk of a very young person is less digestible, and therefore less to be recommended for a delicate infant.

4. It is usually said that *the wet nurse selected should have been confined as nearly as possible about the same time as the mother of the child for whom the milk is required.* Too much stress, however, should not be laid on this contingency; for it should not be forgotten that the constituents of milk not only vary in relative quantities in different animals, but in the same species. So liable are they to vary, that the different circumstances of life may materially affect them in the same individual. Indeed, Parmentier and Deyeux have shown that the milk of women of the same age, confined at the same time, and submitted to the same influences, was always different—in fact, that the milk of the same animal, obtained at different times, varied greatly. (Burdach, *Physiology*, s. 520, p. 356.) All that we should look to is, that the milk is good, and that the age of it should not be too far removed from what the child's mother's milk was; for milk materially changes in its composition as the period of lactation is prolonged; and the female thus, although possessing very excellent milk, may yet supply a fluid which will prove injurious to the suckling. The results of age, as applied to the milk, are summed up as follows by Becquerel and Rodier. The specific gravity varies much. The proportion of water increases from the fifth to the sixth month, and from the eleventh to the twelfth; it diminishes from the first to the second, and from the eighteenth to the twenty-fourth. The solid matters increase in a marked degree from the first to the third. The sugar decreases during the first month, but increases from the eighth to the tenth month. The butter increases considerably up to the sixth month, and then considerably decreases from the fifth to sixth, and from tenth to eleventh month. The salts undergo a slight increase in quantity from the first to the fifth month, then correspondingly decrease. These changes are really most important to trace, as they are an index as to the substitute which, bearing a proper proportion to the amount and quality of nutritive matter required, is best fitted for a child whom it is obligatory to wean, or for whom another diet is imperatively called for. It must be confessed, however, that the constituents of milk vary so much, that it is very difficult readily to estimate its goodness from their present quantity. Its composition varies also within the limits of health, so much that we have often no better method of testing it than trial with the child; when, if it agrees with it, we may conclude it is good. I think, however, it may be stated as a rule, that if the butter in it is in excess, the milk is poor in quality, excepting in syphilis and phthisis, particularly when the latter is accompanied with diarrhœa, and in mental disturbance. In the former, it may fall to 9·12; in the second, to 12·7 per cent.; in the latter, to 5·14; the normal proportion being 26·6. Thus, in acute diseases, the mean is 29·8; in chronic, 32·6; in acute enteritis, 31·5; in acute pleurisy, 54·2; in acute colitis, 54·2. In nurses of feeble constitution, it is 28·78, as compared to 25·96 in those of robust constitution. In very young nurses, it is 15 to 20, 37·8, and so on.

5. *A wet nurse of a melancholic temperament should be preferred.* The milk of a brunette is generally richer in solid constituents than that of a blonde; for which reason the former are preferred as wet nurses. The following analyses, quoted from Simon, were made by L'Heritier:—

	Blonde, aged 22.		Brunette, aged 22.	
	1	2	1	2
Water	892. ..	881.5 ..	853.3 ..	853.
Solid constituents .	108. ..	118.5 ..	146.7 ..	147.
Butter	35.5 ..	40.5 ..	54.8 ..	56.3
Casein	10. ..	9.5 ..	16.2 ..	17.
Sugar of milk .	58.5 ..	64. ..	71.2 ..	70.
Salts	4.0 ..	4.5 ..	4.5 ..	4.5
	1000.00	1000.00	1000.00	1000.00

These are extreme cases; but the average ratio of solid con-

stituents lies from 120 for a blonde to 130 for a brunette. There is yet another reason why a brunette is to be preferred. Blondes usually belong to the sanguine or scrofulous temperament. A fair skin, with brilliant colour, light blue eyes, very light or red hair, are usually present in such cases. The whole digestive powers are weak, and an unusually irritable state of manner is a frequent accompaniment. As a consequence of this sanguine and more passionate character, the milk of blondes is very apt to become altered under mental excitement. In extreme cases, it has been known to produce the death of the infant; but it almost always leads to and generally produces serious results. In the case of a recently delivered woman, whose milk was examined by Simon, who was in a state of considerable fever, induced by a fit of passion, the child was seized with vomiting, diarrhœa, and convulsions. The milk had an alkaline reaction, and a strong animal odour, when boiled. After twelve hours, it developed a large quantity of sulphuretted hydrogen; and yet the casein, sugar, and butter, had not undergone any change in quantity or quality. Indeed, it may be stated here, that most of those peculiar changes which render milk so detrimental do not occur so much in these ingredients as in the *extractive matters*, of which (to our regret, it must be added, in the emphatic words of Lehmann, so aptly used by Becquerel and Vernois) "we know absolutely nothing".

Brunettes usually belong to the bilious or melancholic temperament. In disposition, they are more gloomy and dull. The milk is richer; and the precocious child is, as it were, restrained by this milk from over-excitement in its mental manifestations. Its body has time to be formed and to develope itself before exhausted by undue psychical excitement, and a stronger child is the result.

Intermediate between the sanguine and melancholic is the lymphatic or phlegmatic temperament. It is the reverse of the sanguine. It is accompanied with weak pulse, languid circulation, cold extremities, and pallid skin. There is deficiency of red blood, of vascular action, of tone; and the proclivity is to watery fluxes, and other chronic affections. Such persons are not calculated to make good nurses, and should therefore be scrupulously avoided.

Among the brunettes there is to be found another variety, closely connected with the sanguine. The eyes may be very dark, even black; and so also the complexion. But with this there is a transparency in the look; the eye is unusually bright; the veins appear vividly blue through the skin. Such persons have all the vivacity of character common to the sanguine, and are to be avoided for similar reasons.

Lastly, the nervous temperament is to be rejected, characterised by agitation and trepidation of manner. There is an exaltation in the nervous phenomena, and a general tendency to nervous and hysterical diseases. (Druitt, Williams.) When we remember that a child is eminently impressionable, and has to go through an excitable period in teething, to exalt a nervous tendency cannot be wise. Deyeux examined the milk of a woman who was liable to frequent nervous attacks. He found that, simultaneously with these attacks, the milk became transparent and viscid, like albumen, and did not resume its normal condition till some time afterwards. To expose a child to such variations is most injudicious.

6. *She should have not only good milk, but it should be in sufficient quantity.* This is very important; for upon no point do I think we are so liable to be deceived as upon the quantity of milk supplied. Hervieux, whom I before quoted, states the amount consumed by a child in twenty-four hours to be sixty ounces. This may be exaggerated; but still, when we consider that a child has in the first year of its life to acquire not far from one-third of its full growth and size, we must consider that it requires, at the same time as it has to supply waste and wear, a large quantity of food to meet the emergency. Quetelet, from his calculations, considers that, as a mean, a child grows in length, in the first year of life, from 20 inches to 26 with boys, and from 19 to 26¼ inches with girls; the weight in the former increasing from 6 lbs. 13 oz. in boys to 20 lbs. 7 oz., and from 6 lbs. 3 oz. in girls to 18 lbs. 14 oz. These data do not, however, clearly set forth the extent of food required. We may, however, infer this from experiments made upon animals. The philosophical Boussingault has shown that a calf increases—

	lbs. per diem.
During the period of suckling	2.4
Under 3 years old	1.5
Above 3 years old	.2

From this we may conclude that the greatest amount of growth and consumption of food takes place at the suckling period. This increase of weight, however, bears a direct ratio to the quantity and quality of food supplied. Boussingault has admitted what might be presumed at first sight, that an animal of great size, *cæteris paribus*, will require a larger amount of forage. Again, in regard to the quality: in winter, usually, cattle which are not set aside to fatten are stinted in their food, and fed almost exclusively on straw. Straw is an aliment which, compared to hay or other kinds of fodder, is deficient in both combustible and incombustible aliment. Hence, towards spring, the cattle are thin, and yield but little milk, and have lost much strength. If these results happen to a full grown, they will *à fortiori* occur to a growing animal. The following table from Boussingault gives this statement. It will appear that, for every hundred pounds of living weight, neat cattle require—

	lbs. of hay.
For simple sustenance	0.7
When labouring (Pulsh)	2.0
When in milk (Pulsh)	3.0
Ditto (Perrault)	3.12
Ditto, large cows (Boussingault)	2.73
Growing rapidly (Boussingault)	3.08

Strange to say, farmers, generally supposed deficient in intellect, have found out this truth, unknown to many of our juvenile tiger keepers in London, who always, if they can help it, refuse to employ growing lads when grown men are to be had, having found out that, although their wages are lower, they more than compensate for this advantage by the larger quantity of food they consume.

An infant, therefore, requires proportionally a much larger quantity of food than an older child, or a man. I believe that one of the disadvantages of a wet nurse is this. The breast often appears large and full of milk. Whether this is owing to an increase of adipose tissue between the lacteal ducts, or to the peculiar conformation of the breast in some women, I do not know; but I am sure that many wet nurses, apparently with a full breast, have milk which, although it is found, when examined chemically or microscopically, to be particularly rich and good, is often *insufficient in quantity*. Such nurses are often so anxious to keep their situations, and so devoid of honest principle, that they will keep their fatal secret, and, if it be not detected, the child will die. Yet it is a fraud which can be easily detected. The child cries frequently; his sleep is disturbed; he becomes thin, and generally pines away. Let the child be watched; and, the moment he has had the breast, and the nurse has left the room, offer it artificial food. The zeal with which he will attack this, and the quantity he will consume, the sleep of quiet and comfort which will almost instantly succeed, will reveal the tale, and oftentimes save the child.

[*To be continued.*]

Reviews and Notices.

A Treatise on Rheumatic Gout, or Chronic Rheumatic Arthritis of all the Joints. By Robert Adams, M.D., A.M., M.R.I.A.; Ex-President of the Royal College of Surgeons in Ireland, and of the Pathological Society; Surgeon to the Richmond Hospital, Dublin. pp. 362. London: John Churchill. 1857.

Illustrations of the Effects of Rheumatic Gout, or Chronic Rheumatic Arthritis, on all the Articulations: with Descriptive and Explanatory Statements. By Robert Adams, M.D., A.M., M.R.I.A., etc. 4to, pp. 31. London: John Churchill. 1857.

On Rheumatism, Rheumatic Gout, and Sciatica: their Pathology, Symptoms, and Treatment. By Henry William Fuller, M.D.Cantab., Fellow of the Royal College of Physicians, etc. Second edition. London: 1856. (Chapter xi. On Rheumatic Gout.)

The monograph of Dr. Adams on *Rheumatic Gout*, with its illustrative Atlas, is the result of clinical and pathological investigations continued through many years. The bulk of the work is occupied with a description of the diseased appearances presented in the various joints of the body; the first fifty-two pages only containing a notice of the history of the disease, its causes and symptoms, diagnosis and prognosis, anatomical

characters, and treatment. Dr. Fuller, in his chapter on the same subject, enters more into questions of general pathology; and therefore the labours of these two observers may be considered in a measure supplementary of each other.

No separate monograph on Rheumatic Gout has, we believe, been published in this kingdom previously to this work of Dr. Adams. About half a century ago, the disease was described by Dr. Haygarth of Bath, under the name of "Nodosity of the Joints". Sir B. Brodie, Mr. Key, Lobstein, Benjamin Bell, and especially Cruveilhier, have alluded to the disease; and the latter pathologist proposed for it the name of *usure des cartilages articulaires*, to which, as well as to Dr. Haygarth's term "nodosity", Dr. Adams objects. To the above named writers are also to be added Dr. R. W. Smith of Dublin, and Mr. Edwin Canton of London. Dr. Todd has also described the disease, but under the title of "chronic rheumatism"—a term for which Dr. Fuller finds a distinct application.

In speaking of the *causes* of chronic rheumatic arthritis, Dr. Adams observes that it is to be sometimes looked on as a *constitutional*, sometimes as a *local* disorder. Its occurrence in almost all the joints on both sides symmetrically, at the same time, points to a constitutional origin; and it is frequently traceable to exposure to cold and wet, at a time when the patient had been placed under depressing influences. Dr. Adams agrees with Dr. Todd, in opposition to Dr. Haygarth and Sir B. Brodie, that the disease "is to be observed more among the labouring poor than among the higher classes". Dr. Fuller is more explicit on this point. He says:—

"Referrible, without doubt, to some constitutional peculiarity closely connected with perverted assimilation, it selects as its victims either the weakly and unhealthy, in whom the natural excretions are imperfect or deficient, or else fixes upon those who, though usually robust, have been subjected to some cause of mental or bodily depression. It attacks the offspring of gouty or rheumatic parents whose health is impaired, and whose nervous energy is exhausted by the labour and anxieties of business: it fixes upon the girl just arriving at puberty, in whom the uterine functions are ill performed; it invades the stiffening articulations of the woman who has arrived at that time of life which is marked by the cessation of the monthly periods; it shows itself during the state of debility which follows a miscarriage, or a difficult and protracted labour, more especially when the labour has been accompanied by flooding; it is a frequent attendant upon renal disease; upon the cachexia produced by syphilis or gonorrhœa, or neglected mercurial action; and it is a common sequel of over-long suckling, of excessive venery, of severe and long continued mental exercise, and of mental distress and bodily exhaustion. Neither age nor sex affords immunity from its invasion; but most commonly it shows itself from the age of thirty-five onwards; and its earliest attacks are usually seen in girls whose uterine functions are suspended or ill performed." (pp. 332-3.)

Dr. Adams describes the disease as sometimes appearing quite as a *local* affection, sometimes from over-exertion, sometimes from injury of the joint. It is rather difficult to understand how true rheumatic gout can arise from a purely local cause. The following explanation given by Dr. Fuller seems more satisfactory:—

"Careful inquiry into the history of the case will seldom fail to unveil the mystery. The patient will generally be found to have suffered from rheumatism at some former period; or to have experienced pain recently in some of his other joints; or, possibly, to have had slight temporary swelling in the knee, or in one of his toes or knuckles; and thus a clue to the nature of the disease will be obtained at once, and may be safely acted on. Indeed, such a discovery is of great practical importance, inasmuch as it often leads to the employment of remedies addressed to the relief of constitutional derangement, when the treatment might otherwise have been purely local." (pp. 344-5.)

In reference to *age* and *sex*, rheumatic gout attacks the young as well as the old; and, according to Dr. Adams, is equally common in women and men, while Dr. Fuller regards it as principally attacking females—an opinion in which he agrees with Haygarth. Dr. Adams draws, however, the distinction, that the disease is more frequent in the hip-joint in men, and in the wrist and hands in women.

The *symptoms* of the constitutional disease are generally, according to Dr. Adams, ushered in by an attack of rheumatic fever. Dr. Fuller says that these acute rheumatic symptoms are mostly slightly marked from the beginning; while, in some cases, a thorough attack of acute rheumatism changes so completely, after the first intensity of the attack, into one of rheumatic gout, that he "entertains considerable doubt whether an attack which commences as acute rheumatism may not change its type under certain conditions of treatment or constitution, and terminate eventually in rheumatic gout."

Dr. Adams quotes Sir Benjamin Brodie's description of the symptoms of rheumatic gout; premising that this eminent surgeon seems to have taken his description from observations made among the wealthier classes of society.

"The patient, in addition to his local ailments, always suffers, in a greater or less degree, from the usual effects of dyspepsia, which are aggravated by want of exercise; he is liable to acidity of the stomach and flatulence after his meals, is nervous and irritable, and every error as to diet, as well as all mental excitement, will produce an aggravation of both the constitutional and local symptoms.'

"In his experience he has found that in a few instances the disease, after having reached a certain point, becomes stationary, or there may be, apparently, some degree of improvement; but except when it was treated in the very earliest stage, he does not recollect any one case in which there was anything approaching to a cure. In the majority of cases this disease is progressive, the joints becoming more and more disorganised, sometimes with little, at other times with much, increase in size, and the increase depends not only on the cause before adverted to, but also on a deposit of new bone in the neighbourhood of the affected joint, and sometimes on that of a gouty concretion in the surrounding cellular tissue. '*Anchylosis*,' he adds, 'sometimes takes place as an ultimate result, but there is little tendency to suppuration.'" (p. 14.)

With Sir B. Brodie's descriptions, Dr. Adams generally agrees: but he differs from him with regard to anchylosis, which he considers as a very rare result of the disease. To show "how a good observer might easily fall into the error of imagining that complete bony anchylosis existed in many joints, had he relied on external examination only," he quotes a case from Cruveilhier, where the shoulder, knee, and elbow-joints, appeared anchylosed during life, but where, after death, no anchylosis was found, but great deformity of the articular surfaces. Dr. Adams has met with many cases in which the immobility of the joints was found to have arisen merely from alterations in their form.

In giving a general description of the alterations of structure found on *post mortem* examination of cases of the disease, Dr. Adams arranges them under three heads: 1. In the fibrous and synovial tissues; 2. In the cartilaginous and fibro-cartilaginous structures; 3. In the osseous structures.

In the early stages, if a knee or shoulder-joint be examined, it will be found to present the appearance formerly called *hydrops articuli*; an illustration of which is given in plate ix, fig. 1, of the Atlas. "The synovial membrane will be found to be thickened, and internally to present a red colour; vascular tufts, red and hypertrophied synovial fimbriæ, will be seen in the joint." The capsule is distended also with a preternatural quantity of serous fluid.

In cases of long standing, much of the fluid has been removed: the capsular membranes are greatly thickened, and occasionally have been found to contain bony deposits; the round ligament of the hip-joint, and the tendon of the biceps and glenoid ligament in the shoulder-joint, are removed; as are usually also the "cartilages of incrustation," and the inter-articular fibro-cartilages. The lateral ligaments of the ginglymoid joints are unduly elongated; sometimes so much so as to permit of partial or complete dislocation. Dislocation of the arthrodial and enarthrodial joints may also occur, from the

capsules not recovering the effects of over-distension in the early periods of the disease.

Of the origin of the so-called "foreign bodies" or "pendulous bodies," generally found in the joints in cases of chronic rheumatic arthritis, Dr. Adams gives the following explanation.

"The synovial membrane of the joints is, no doubt, the structure in which is laid the foundation of the chronic, as it is of the acute rheumatic arthritis. In the substance of this membrane, now in a morbid condition, or in the cellular structure immediately subjacent to it, is deposited the particle of lymph, which, soon becoming organised, forms a small tumour, which projects slightly in the interior of the synovial sac of the joint,—and this I believe to be the first step towards the further development of the foreign bodies found in the interior of almost all the synovial sacs. At first the small tumour has its basis broad, and seems immediately connected with the subjacent part. By degrees it advances into the interior of the synovial cavity, and thus its basis, at first comparatively broad, becomes narrowed into a neck, which gradually elongates, and becomes more and more attenuated, so as to form a lengthened pedicle or funis, connecting the little body to some of the various structures in the interior of the joint. Thus the foreign body may be connected by means of a slender ligament to bone; sometimes to the interior of the capsular membrane; sometimes to cartilage or to fibro-cartilage, etc. (See Plate VIII. Fig. 3.) This slender connecting ligament permits a certain extent of motion to the foreign body; so that, without losing its attachment, it may appear within certain limits in different parts of the cavity. Lastly, when many of these foreign bodies exist simultaneously in any one joint, they have been found adherent one to another (see Plate V), and also to the interior of the capsular membrane, by means of similar long ligamentous filaments. In one case I have seen in the shoulder-joint the foreign body nearly two inches long, and of a crescentic figure, which seemed to embrace the anatomical neck of the humerus with its two cornua, and the latter adhered by their extreme points to the synovial membrane, investing this portion of the neck of the humerus within the joint. (See Plate II, Letter *g*.) Also, but rarely, these foreign bodies have been found free in the interior of the articulation; once I have seen one embedded in a receptacle formed for it in the back part of the condyle of the femur. (Museum of College of Surgeons, London.)" (pp. 30-2.)

There is also another appearance presented in this disease, which Dr. Adams thus describes.

"Foreign bodies of this second species, which I have ventured to name '*additamentary bones*,' are usually to be found deepening and enlarging the cavities of reception for the heads and condyles of bones composing the articulations. I have only noticed these productions in joints which have been long and severely affected by this peculiar disease. When the brim of the acetabulum of the hip-joint is rendered—as it very frequently is by this disease—preternaturally deep, the increased depth is usually owing to the addition of pieces of bone which appear to me to be newly formed. (See Plate VII. Fig. 3, *b*, *b*.) These osseous productions also seem, in some rare cases, to render the glenoid cavity of the scapula larger and deeper, thus, as it were, better to accommodate the head of the humerus, which usually becomes enlarged under the influence of this disease. There is a remarkable preparation of a shoulder-joint in the Museum of the College of Surgeons in this city, which will exemplify the ultimate effects of this chronic disease on the bones of the shoulder-joint. The head of the humerus is greatly enlarged; the surface of the glenoid cavity is covered with porcelain-like enamel, and its posterior margin is much deepened and widened by the addition of several pieces of bone, evidently of new formation. These, six in number, are somewhat pyramidal, each being fully as large as one of the carpal bones (Atlas, Plate IX. Fig. 7)." (pp. 33-4.)

Another appearance presented in joints affected with chronic rheumatic arthritis, consists of membranous productions or "vascular excrescences."

"They are usually found in the recent state, highly red and vascular. Anatomists have noticed, that in almost all the joints vascular synovial fimbriæ exist at the margins of the cartilaginous surface. They are to be seen in the normal state of the joint, surrounding the neck of the femur and humerus, as well as elsewhere. These fimbriæ, under the influence of disease, become hypertrophied, and present very remarkable appearances, which have not been much noticed by pathological anatomists. Those enlarged fimbriæ, 'or vascular excrescences,' from the interior of the synovial sacs of the joints, seem specially to exist in cases in which the disease called chronic rheumatic arthritis had commenced in a joint, and they are to be found in a comparatively early period of the affection." (p. 36.)

The cartilaginous incrustations of the ends of the bones being removed, the place of the cartilage is supplied by an ivory-like enamel. In the hip or shoulder, the head of the bone becomes "smooth as an ivory ball;" in the ginglymoid joints, the patches of enamel are grooved in the direction of the movements of flexion and extension. Other changes consist in the formation of bony vegetation round the articular surfaces; the shortening of the necks of the humerus and femur (giving rise to appearances which have been mistaken, Dr. Adams says, for united fracture): expansion of the sockets of the joints, these being sometimes rendered deeper and sometimes more shallow; and occasional increase of hardness and density in the shafts of the bones.

Dr. Adams says that in the *post mortem* examinations of cases of chronic rheumatic arthritis in Dublin, no evidence of true gout has been found; "no cretaceous deposits in the bursæ or in the neighbourhood of the diseased joints, nor any deposit of lithate of soda on their articular surfaces." On the other hand, Dr. Fuller says that, in some cases which present most of the characteristics of rheumatic gout,

"There exists a deposit, more or less extensive, of a white pulverulent matter. Sometimes this matter is deposited over the whole extent of the articulating surfaces, so that the cartilages appear smoothly incrusted by it; at others, it is sparingly sprinkled over their surface in the form of a fine white powder; at others, it is limited to a few parts only; and at others, again, it not only covers their entire surface, but pervades their structure, and fills the cancelli of the subjacent bone. That this deposit, which analysis has shown to consist of lithate of soda, mixed occasionally with some lithate of potash, ammonia, and lime, as also with chloride of sodium, and with phosphate and carbonate of lime, is identical, or nearly identical in composition with the deposit which exists in gout, and that it occurs in those cases only of rheumatic gout which approximate most closely to genuine gout, is susceptible of easy proof; but I cannot therefore admit the conclusion, that the existence of such deposit is of itself sufficient to mark such cases as examples throughout of true gout." (p. 340.)

This deposit may sometimes be met with in large quantity in one joint; while another equally enlarged joint of the same patient shall present no appreciable amount. In such cases, Dr. Fuller thinks that "the disease has been at one time rheumatic, and at another more strictly gouty; and that the difference in the results observed after death has arisen from the prevalence of the gouty element during the time the first named joint was affected, and of the rheumatic element during the affection of the latter."

A comparison of the observations of the London and Dublin writers on arthritis seems to point out, that the gouty element is present in the disease now being considered more frequently in the English metropolis than in Dublin.

A word or two more as to the pathology of rheumatic gout. We have heard, if we remember rightly, the very existence of the disease called in question by an authority great in such matters. "Rheumatism is rheumatism; and gout is gout: no mongrel half-breed!" But, on the other hand, Haygarth, Brodie, Fuller, Todd, and Adams, *cum multis aliis*, all describe a disease which has some of the characters of rheumatism, and some of gout; yet agreeing in its description with neither of these affections. What is it, then, really? Is it what the name "rheumatic gout" at first sight seems to imply? Or is it not rather a disease *sui generis*, as Dr. Fuller broadly hints in the following passages?

"It is my firm conviction, that although we may meet with cases in which true rheumatism and true gout do both mani-

fest themselves at different periods in the same individual, yet that rheumatic gout has no connection with either of these diseases, beyond that which attaches to it in virtue of its being a constitutional disorder, producing local manifestations in the joints. . . . . Indeed, the circumstances under which rheumatic gout occurs, the extraordinary obstinacy of its symptoms, the peculiar alteration in the structure of the joints, which forms its most characteristic feature, and the class of remedies by which it is most successfully combated, all seem to indicate a close connection with some *peculiar* constitutional taint. The able researches of Dr. Gairdner have rendered it extremely probable that true gout is in some way connected with a variation in the relative quantities of urea and uric acid in the system; and hereafter it may be discovered that rheumatic gout is dependent on some other perversion in the relative proportions of the constituents of the blood. And if this be so; if, in short, the disease be due to a disordered condition of the blood essentially distinct in its character from that which gives rise to pure gout or to pure rheumatism, we are bound in accordance with sound pathology to separate it from the diseases it so much resembles, and with which it is sometimes intimately blended; to trace out its peculiarities; and to establish, if possible, by chemical demonstration, its claims to be considered a special disorder." (pp. 342-3.)

In the *treatment* of chronic rheumatic arthritis, Dr. Adams, regarding the disease as of sub-inflammatory nature in the early stage, recommends local depletion, warm baths, and mercurials, at that period. Dover's powder with watery extract of opium, and sometimes the ammoniated tincture of guiacum, he also has found useful. With regard to thermal springs, he says that the study of the treatment of the disease has not yet been sufficiently advanced to decide as to their merits. In the early stages, rest is indispensable; but when the disease has gone on to the destruction of articular surfaces, exercise of the limb improves the general health, and enables the ends of the bones to move more freely on each other—probably from the induction of eburnation. Dr. Fuller enters much more largely into the subject of treatment. But we must refer our readers to his excellent work for information; and we must also defer to another opportunity a notice of the second part of Dr. Adams's able monograph—that which describes the manifestations of the disease in special localities.

[*To be continued.*]

The Successful Treatment of Scarlet Fever: Also Observations on the Crowing Inspiration in Infants. By P. Hood, Surgeon. pp. 200. London: Churchill. 1857.

When the student has conscientiously imbibed at his Alma Mater the varied information which is considered necessary to render him a fit and proper person to take charge of the sick bodies of people, he will still find that he has a vast deal of practical knowledge to acquire before he can go through this business with any satisfaction to himself. For instance, his views concerning the nature of scarlet fever, its rise, progress, and conclusions may be most scientifically correct, and he may feel, theoretically, a perfect confidence in his ability to engage himself in the treatment of the disease; but it is then, for the first time, when he stands alone by the bedside of his patient, that he makes the discovery of how much he has yet to learn in the matter.

All of us have to go through this seasoning process; and it is just at such times that we feel thankful to lay our hand upon any support which may aid us in our difficulty. Now, in Mr. Hood's book the young practitioner will find a most valuable guide to help him through the intricate passages of the treatment of scarlet fever. Here are contained, in detail, the numerous items which the large and long experience of the author has proved to be of the greatest service in the management of this disease. The results of his practice, indeed, prove the value of his way of handling the disease. "During five and twenty years of active practice," says Mr. Hood, "I have lost only two patients from it." He knows perfectly well that scarlet fever is not to be cut short, but that the practitioner's business is simply to lead his patient safely through this *via mala* of disease. The rogues and mountebanks of our profession alone have the secrets of curing diseases off-hand.

The credit which Mr. Hood claims for himself in his book is this: that he clearly lays down in it the rules for the due application of remedies, and indicates the proper times for their administration. "The success of treatment," he says, "depends upon the adaptation in regular order of all that is valuable out of the many agents hitherto employed for the cure of scarlet fever by others." Emetics he considers it advisable always to give to children in the early periods of the fever; then come purgatives, next quinine and opium, and then wine and proper diet. Quinine he considers of such efficacy as almost to warrant him in saying that it is an actual antidote to the blood poison.

We must refer our readers to the volume for the details of this practice. They will find it replete with most useful practical hints. We can warmly recommend it to their study as containing the results of the long experience of an observant and honourable practitioner of our art.

Periscope.

PRACTICE OF MEDICINE AND PATHOLOGY.

HYGIENIC TREATMENT OF PHTHISIS.

In the *American Journal of the Medical Sciences* for January 1858, Dr. Austin Flint, of Buffalo, reports the histories of twenty-four cases of arrest of, or recovery from, pulmonary tuberculosis,—not with any idea of furnishing data for determining statistically the changes of arrest of the disease, but with the object of comparing the points pertaining to management, in which more or fewer of the cases agree.

DEFINITION OF THE TERMS ARREST AND RECOVERY.

In the living body, we can judge of arrest or non-progression of the disease only by means of local and general symptoms, and, in some measure, by physical signs. With our knowledge of the laws of pulmonary tuberculosis, if a patient present for successive weeks and months a marked improvement in the symptoms referrible to the lungs, viz., cough, expectoration, respiration; and also in the condition of the body as denoted by increase of weight and strength, the disease is certainly not progressing, and may be retracing its steps toward recovery. The latter may be considered to have taken place, when pulmonary symptoms have been wanting for several months, and a healthy condition of the body is restored. A comparison of the results of physical exploration before and after the arrest of the disease, will furnish evidence, first, of the correctness of the diagnosis; and, secondly, of the improvement which has taken place in the state of the pulmonary organs, as well as of the permanent effects of the disease upon these organs.

We have not space to report the cases (in all of which the evidence of pulmonary tubercle was confirmed by physical signs); but the results at which Dr. Flint has arrived by comparing them together may be given with slight abridgement.

An arrest of the disease may take place without recovery; in other words, the tuberculous affection may cease to be progressive, the processes of restoration never being fully completed. One patient, who had been attacked twenty-eight years, and his wife eighteen years before, for example, were not free from the symptoms of pulmonary disease; yet the history and present condition showed that the disease, as regards destructive changes, had for a long time remained stationary. The same is equally true of other cases in which the date of the tuberculous deposit was much less remote. A very marked degree of improvement in the local symptoms, conjoined with the recovery of the normal weight and strength, after the lapse of several months, suffices to show that the disease is arrested; and this conclusion is not disproved by the renewal of the evidences of the progress of the disease at a future epoch. Recovery from the disease can be pronounced only when, in connection with restoration of the general health, the local

symptoms have entirely disappeared. This recovery may be complete, albeit the patient subsequently falls a victim to tuberculosis, as in one case, in which a fresh deposit of tubercle took place eighteen years after a former exudation. There may be a recovery which is not permanent, but not less a recovery on that account. To be permanent, the disease must not return; or, at all events, not for a considerable space of time. Of the cases in this collection, in thirteen an arrest of the disease was followed by complete recovery; in eleven, the facts show arrest without furnishing evidence that the processes of restoration were fully completed. To what extent, if at all, are those who have recovered from tuberculosis rendered thereby more liable to the disease thereafter, is an interesting question which cannot be answered without more data than are as yet available. In two of the cases, thirteen years have already elapsed without any reproduction of the disease; the dates of the recovery, in the other instances, extending for variable periods between six years and a few months.

INTRINSIC TENDENCY TO ARREST.

In several of the cases the arrest of the disease was evidently due to an intrinsic tendency to that result. In other words, the disease ceased to be progressive, in consequence of its self-limitation. This is fairly to be inferred in those instances in which no appreciable external influences, in the form either of medication, diet, or regimen, were brought to bear on the course of the disease. Eight of the cases may be embraced in this category. In these cases the patients took no remedies of importance: and continued, unchanged, the same habits of living as before the development of the disease. Examining these cases, severally, there are no apparent circumstances common to them and distinguishing them from the others, to which this inherent tendency to arrest may be imputed. In conformity with the current pathological views, we have only to say that in these instances the *amount* of the tuberculous dyscrasia was limited, and was exhausted after a certain quantity of exudation had taken place.

The fact of the existence of an intrinsic tendency to arrest in a certain proportion of the cases of pulmonary tuberculosis, is highly important. It is a fact hitherto not sufficiently appreciated; indeed, it is but lately that such a tendency, in any instance, has been recognised. Two questions suggest themselves in this connection. One is, in how large a proportion of the cases of pulmonary tuberculosis does this tendency exist? It will be long before data sufficient for determining a definite answer to this question will have been accumulated. The second question is, in a measure, involved in the first. It is this: In a certain proportion of the instances in which an arrest of the disease appears to be due to measures of management, is not the result rather attributable to an intrinsic tendency? This question it is of course difficult to answer definitively in individual cases. Both these questions are equally applicable to other diseases than pulmonary tuberculosis, and, with our present knowledge, are alike unanswerable.

ANTIPHLOGISTIC TREATMENT NOT EMPLOYED.

No antiphlogistic and debilitating measures entered into the treatment of any of the twenty-four cases; except that one of the patients had been bled once before coming under observation. Dr. Flint thinks it more than probable that, in past times, the natural tendency of the disease to arrest has been not unfrequently frustrated by the general and local depletion, mercurials, emetics, low diet, confinement within doors, etc.

HÆMOPTYSIS.

Hæmoptysis occurred in eighteen of the twenty-four cases. In ten it occurred more than once; and in some it occurred several times. This proportion exceeds that in which, according to Louis, hæmorrhage may be expected to occur in cases of tuberculosis—a fact which goes to show that this occurrence of hæmorrhage does not oppose arrest of the disease.

CHANGE IN HABITS OF LIFE.

In sixteen of the twenty-four cases, excluding eight in which no measures were employed, a change was made by most of the patients in the habits of life. This change, with a single exception, consisted in all instances in relinquishing, partially or entirely, sedentary pursuits, and giving proportionately more time to exercise in the open air. The pursuits relinquished were as follows: Teaching school and weaving; printing in two instances; teaching school and attending medical lectures; study of the law; office duties of a lawyer; teaching anatomy; theological studies and writing sermons; medical studies and duties of telegraphist; making millstones; domestic seclusion. In the excepted case, the patient relinquished severe labour as a farmer, for several months of recreation and travel. In five cases, the change in habits constituted the sole measures of management.

It is to be remarked that in all the instances in which arrest of the disease occurred without any measures of management, the habits of life were more or less active, and generally quite so.

EXERCISE IN THE OPEN AIR.

The exercise in the open air was not generally of the kind which often goes by that title, consisting in simply airings by gentle walks or drives; but it consisted in rough occupation, often involving considerable, and sometimes great exposure to the vicissitudes of the weather. In three instances it consisted in the labour of medical practice, which in two of the instances was in the country; and in the remaining instance, in addition to visiting patients, horseback exercise was taken daily, and persevered in for several months. In two instances the patients (females) performed laborious housework. In one instance, the in-door avocations of the lawyer, which had been extremely arduous, were exchanged for several weeks of constant travel in midwinter, during which the pulmonary symptoms ceased. In one case the patient left sedentary pursuits which confined him constantly within doors, for hunting, fishing, rowing, etc., to which for several weeks he devoted himself entirely. A student at law gave up his profession, and, after recruiting by field sports, engaged in business and went to California. One patient continued to labour out of doors during the autumn and winter as a ship carpenter. A professor of anatomy left the duties of the dissecting-room and of medical practice, and, crossing the Atlantic, was on foot daily, running about London and its vicinity for several months, a hæmoptysis occurring during this time, to which he gave no heed. A day labourer continued to work, occasionally losing a day or two. A printer went to work on a farm, and afterwards engaged in the out-door business connected with the circulation of a daily newspaper. A clergyman took to riding and walking and sawing wood. These facts go to confirm the correctness of the conclusions which practitioners have frequently formed from their observations in individual cases, viz., that laborious, fatiguing exercise in the open air is best suited to promote the arrest of pulmonary tuberculosis. Such exercise is obtained, in some instances, by engaging in field sports in which the mind becomes interested, or in travelling; in other instances by a change of occupation by which sedentary pursuits are relinquished for those requiring active, out-door employment; and in other instances by a necessity which compels the patient to continue daily physical labour as long as possible, as a means of support. This necessity, painful as it may sometimes seem, may be far less a calamity than it appears.

CLIMATE.

Change of climate entered into the management of but few of the cases. In two instances only was there a change of climate prior to the evidence of an arrest having taken place. In one of these the patient passed the winter season in the southern part of America; in the other the patient crossed the Atlantic, and returned after sojourning in England a few months. In these two cases there is room for the inquiry, how far the climatic change contributed to the result—another inquiry which is easier raised than answered. In three other cases, the patient passed a winter at the South after the arrest had occurred. In two of these cases the health improved during the southern residence; in the remaining case the patient thought the influence was unfavourable. During the period that these cases of arrested tuberculosis have been collected, not a few of Dr. Flint's patients have resorted to change of climate, and hence, in the great majority of these instances, the disease has not been arrested. So far as his experience goes, then, it fails in furnishing even much presumptive evidence in favour of a beneficial influence from change of climate. On this subject he has been led to conclusions to which others have also arrived, viz., that climate, in itself, exerts no special agency in determining an arrest of tuberculosis; but that it may favour this result indirectly by affording better opportunity for exercise in the open air, and furnishing objects of interest to the mind which will secure that object.

By the remark just made, he does not mean to be understood as saying that tuberculosis is as likely to be developed, other things being equal, in one climate as in another. Entertaining the view just expressed, it has seemed to him far less

important to fix upon a situation supposed to be the most favourable in its climatic aspects to the tuberculous patient, than to select a residence where the inducements to active habits of exercise are greatest. To place a patient in a group of invalids, in a particular spot where he is expected to derive some specific remedial influence from the atmosphere, is rarely useful. The *ennui* incident to such a position for a man of active habits of mind and body is intolerable, and the moral effect of his associations is injurious. Patients will do wisely in avoiding the favourite places of resort for those affected with the disease, and in choosing points where the incitements to, and the resources for physical exertion abound. Generally, the objects of change of climate are better secured by frequent change of place than by remaining stationary. Travelling in foreign countries, even when, so far as climate is concerned, the change is for the worse rather than for the better, may be in a high degree useful, because the exercise which it invites is not endured as a task, but accepted as a means of mental gratification.

DIET: ALCOHOLIC STIMULANTS.

It was not an object in the management of these cases to lower the powers of the system by reducing the alimentary supplies either in quantity or quality. On the other hand, it was a prime object in the instances in which treatment was directed to sustain and develope these powers by a highly nutritious plan of dietetics. The patients were encouraged to live generously, indulging and cultivating an appetite for any and all the varied wholesome articles of food, with a full proportion of meat.

Wine, beer, or spirits, in moderate quantities, entered more or less into the management of Dr. Flint's cases. He has lately advised the use of alcoholic stimulants in phthisis more frequently than formerly; and he is disposed to attribute to them much value. He has observed that patients affected with tuberculosis are often able to take spirits in large quantity, without experiencing stimulant or intoxicating effects. The production of these effects is, in his opinion, a sign that the quantity taken is too large; but any quantity within this limitation is likely to be useful. It may be said, that the patient would be rendered liable to acquire habits of intemperance: but, Dr. Flint observes, it remains to be ascertained by a collection of facts, whether this acquired liability would be so great as to forbid the physician from giving the patient the benefit of the remedy. He believes that drunkenness is rarely due to the use of stimulants given strictly as a remedy, and when the production of their ordinary intoxicating effects is considered as contraindicating or limiting their use.

MEDICINES: COD-LIVER OIL.

In no instances were any remedies given with reference to a special influence on the tuberculous cachexy, unless the cod-liver oil be regarded as a remedy of that kind. Tonics frequently entered into the management. These were given with a view to their effect on the processes of digestion and assimilation, and their importance is to be measured by this effect. In so far as they tend to increase the activity of these processes, remarks on their value are already anticipated in what has been said under the head of dietetic management.

The cod-liver oil does not hold a conspicuous place in the management of these cases. Several of the cases occurred before this remedy came into vogue. In other instances it was not taken, or taken for a short time only, in consequence either of a strong repugnance to it on the part of the patient, or its being found to disturb the digestive organs. In very few of the cases was its use persisted in for a long time. It was continued longest in one of the most interesting and striking cases in the collection. The inference which the reader might naturally draw from the histories of these cases as regards the writer's opinion of the value of the cod-liver oil, would do injustice to this opinion. Had a larger number of these cases occurred within a more recent period, or were the cases reported during the last few years in which the progress of the tuberculous affection appeared to be greatly retarded, although not arrested, this remedy would be found to enter more generally and often largely into the treatment. That it is a valuable remedy in the management of pulmonary tuberculosis, there can scarcely be a doubt; but it is to be considered that, since it has become emphatically *the* remedy employed in this disease, improved pathological views and the lessons of experience have wrought a radical change in the management as regards other measures—a change consisting in the abandonment to a great extent, of antiphlogistic and debilitating measures, and a recognition, more and more, of the importance of measures of an opposite character. Consequently, assuming (what is undoubtedly true) that the disease is managed more sucessfully of late than a few years ago, it is not easy to determine how much of this greater success is to be attributed to the use of the cod-liver oil, and how much to the change just referred to. Practically, this is an important problem, but data sufficient for its solution are not yet available.

ENERGY AND PERSEVERANCE ON THE PART OF THE PATIENT NECESSARY.

A point pertaining to the mental constitution of persons affected with tuberculosis seems worthy of notice. As regards the successful management of the disease, much depends on the patient's energy and perseverance. Tuberculous patients, as is well known, usually entertain sanguine expectations of recovery; but in a large proportion of cases they expect recovery to take place without any extraordinary agency on their part to secure that result. The disease, while it engenders hopes which are so often fallacious, seems frequently to impair that determination of purpose without which the means requisite to effect an arrest will not be efficiently pursued. A passive expectancy of recovery, and a calm acquiescence in the prospect of a fatal termination, belong to the natural history of the disease. On referring to the cases reported, Dr. Flint finds that, in general, the persons manifested greater resolution than is usually associated with the tuberculous cachexy. This was due in some instances to innate strength of character, and in other instances to the force of circumstances. A feeling of inability from his situation to give up to the disease, may operate in behalf of the interests of the patient much more powerfully than the apparent advantage of leisure and wealth. Dr. Flint was impressed with the truth of this remark by a conversation, since he began to write this paper, with a person whose case is included in the foregoing report. The person referred to is a medical man, who was affected with tuberculosis thirteen years ago. At that time young in the profession, and dependent upon it, it seemed to him out of the question to relinquish, even temporarily, its duties; and, fully sensible of his danger, he deliberately resolved to continue his labours as long as possible, and to die in harness should the disease prove fatal. He attended to all his calls, night and day, and, in addition, practised daily and systematically the curative measure pronounced infallible by the great Sydenham, viz., horseback exercise. A person of a character less resolute, or so situated as not to feel the same incentives to exertion, would perhaps have succumbed to the same amount of disease.

SUMMARY.

In the management of pulmonary tuberculosis, the grand ends to be attained are, the removal of the cachexy on which the progress of the disease depends; the consequent arrest of the disease; and the promotion of the processes of restoration. There is no special medication to be pursued for the attainment of these ends: they are to be attained by measures which, in general terms, develope and strengthen the powers of the system. The measures are hygienic rather than medical; but much importance often belongs to the latter. The hygienic measures which are most important are laborious exercise in the open air, conjoined with agreeable mental occupation; frequent change of business, the selection of a more eligible climate, and travelling, are also desirable, if not necessary. Generous diet, and, in many instances at least, the free use of alcoholic stimulants, are also conducive measures. The medicinal remedies, in addition to those which are simply palliative, are chiefly those of the tonic class; and in this category may be included cod-liver oil.

Dr. Livingstone. A dinner is to be given this day (Saturday) to Dr. Livingstone, the African traveller, on the occasion of his departure from this country for a fresh expedition into the interior of Africa. He is furnished with all requisite assistance from the Government of this country to push his discoveries to a still more successful conclusion than heretofore. A sum of £5,000 has been assigned to him for the prosecution of his enterprise. He is to be accompanied by competent assistants, and, in short, everything appears to have been done which can help him on his way. Dr. Livingstone is to proceed in the first instance to the Cape of Good Hope. From that point he and his companions will be conveyed in a Government vessel to the mouth of the River Zambese, and thence three hundred miles up the river in a steam-launch; and not until they have been landed in safety at a point so far onward in the vast continent which they are about to explore will they be left to themselves.

British Medical Journal.

SATURDAY, FEBRUARY 13th, 1858.

PUBLIC HEALTH.

The quarterly stock-taking of the public health by the Registrar-General is an invaluable proceeding, inasmuch as it constantly keeps before the eyes of the authorities and the public a true account of what has been done, and what remains to be done, with respect to sanitary reforms. As long as people rest only upon their impressions in these matters, as long as that important article—human health and longevity—is an unknown quantity, what mistakes the world is apt to make about it! How many ruddy, respectable old gentlemen, who have completed their threescore and ten, are to be met with every day, who stoutly maintain that people in these degenerate days do not live as long or keep as healthy as they did in the good old time! How often do we hear Old Parr's age quoted as a proof that in the "antique age" the race was more vigorous and far longer lived than at present! These opinions, founded on that respect for the past which seems so innate in the human mind, are, however, completely subverted by an appeal to facts. "In London," says the Report before us, "during the sixteenth century (the days of good Queen Bess), the population lived about 20 years on the average, and 50 died out of 1,000 living; .... the population now lives about 37 years, and the mortality has fallen to 25 in 1,000." Thus we see that in the good old times the people lived just seventeen years less than they do now, and the mortality was just double what it is at present.

The Registrar-General quotes this remarkable fact as a proof of the silent advance which the English race have made in their average longevity and health during the period in which our manners, habits, and morals, under the influence of civilisation, have so greatly improved. Arguing from this great amelioration during a time in which sanitary science was unknown, and when the improvement was only a consequence of the general advance of the age, he very justly asks whether we may not expect the improvement in public health to be greatly accelerated, now that public hygiene has become a popular science, and has a place among the institutions of the state. The death-rate for the most favoured districts in England at the present moment is as low as 17 per 1,000, whilst the mortality for the whole country is 22 per 1,000. Thus, between the best and the average public health, there is a difference of 5 deaths per 1,000—no small area for the exertions of the sanitarian; becoming extended, however, if we take the highest instead of the average mortality, or 25 per 1,000, to 8 deaths per 1,000 more than there should be, even supposing that we take the death rate of 17 per 1,000 as one that cannot be improved. We well know, however, how much there is to be done even in the most healthy districts; and we think the Registrar-General is justified in asking whether what he calls the *unnatural* deaths, or those which are in excess of the mortality in the healthiest districts, are not a reproach to the present condition of sanitary science. "If the people were shot, drowned, burnt, or poisoned by strychnine, their deaths would not be more unnatural than the deaths wrought clandestinely by disease in excess of the quota of natural deaths."

Of the unnatural or unnecessary deaths which occurred last year, 18,328 happened in the country, and 73,528 in the town districts. This statement clearly points to the causes principally in operation to produce the redundant mortality—foul air and water, and deficient light—the three spectres that are to be found in the cupboards of most poor men living in large towns. It is not sufficient, however, that we know the shape and dimensions of these arrows, that fly so incessantly, and kill unseen. We must make their presence patent to those who are most obnoxious to their wounds. The lower classes of this country are totally careless about sanitary precautions: indeed, many of the higher classes, and among them those whose duty it is to know better, seem to ignore the great science of public hygiene as a mere toy of the day. Sir John Hall, Inspector-General of Hospitals, for instance, is of opinion that sanitary science "can be picked up in any sixpenny book". It is not surprising, therefore, that poor people are ignorant, when we find such contemptuous expressions with respect to the highest of all the different branches of medicine—preventive medicine—held by one of the great sanitary officers of our army. It takes time to penetrate the thick crust of prejudice, whether it be in high or in low places, and we must wait patiently for the good time coming. There are evident signs abroad, however, that we are advancing rapidly in the new path. We are opening up, one after another, the foul fever jungles of large towns, and now have the light of the *Times'* bull's-eye streaming in upon the shocking condition of our soldiers, even when in home quarters. The report of the Royal Commission just issued is a singular proof of the amount of ignorance or carelessness which may exist even in our very midst as to the most ordinary conditions of health. Our household troops are fed *during the whole time of their service on boiled beef!* their barracks are stinking, and their beds are placed within a foot of each other in the dormitories. Can it be wondered at that the result is a mortality among these fine men, greater than can be found among many notoriously unhealthy trades? All the while we have a medical department, whose duty it should be to prevent the existence of such conditions; but, as the *Times* says, we have no doubt whatever that department will be able to prove, to its own satisfaction, that it is precisely the one that has no voice at all in the matter!

THE WEEK.

The following petition is intended to be presented to both Houses of Parliament early in the present Session:—

"That the surgeons of militia regiments are, in almost every instance, medical practitioners of many years experience, and have been appointed by their respective lords lieutenant of counties to fill this important position, from a perfect confidence in their fitness to discharge any medical duty.

"That they have diligently and efficiently performed, whilst embodied, every required duty, both in camp and garrison, at home and abroad, and inspected during the late and present war thousands of recruits for the regular army, in a manner satisfactory to the War Department.

"That when a regiment is disembodied, the position of the

surgeon becomes at once anomalous—holding no military rank or position; he is at the same time compelled under the Militia Act to reside at the head quarters of the regiment, in charge of the permanent staff; at the nominal remuneration of two pence per week for each man, woman, and child, and for this sum he is required to supply drugs, leeches, and surgical appliances, which, in the majority of instances, it scarcely defrays the expense of; and its total annual amount does not average more than £30; whereas the men composing the permanent staff, being principally old soldiers, who have seen much active service, require constant care, attendance, and expenditure for medicines.

"That the position of militia surgeons, so far from being an introduction to private practice, or other professional employment (as was stated in your Honourable House during last Session), is positively injurious; for no institution will select, or private family employ (as can be proved by numerous instances) a medical attendant who at any moment may be called on with his regiment to serve in a distant part of the kingdom, the Mediterranean, or North America.

"That when the surgeon is absent with his regiment during embodiment or training, resident established practitioners will necessarily obtain such local influence and standing as to preclude all hope or possibility of his ever being able to regain that practice he may have previously enjoyed.

"That the surgeons of militia are willing to undertake any duty they may be called on to perform; and they pray your Honourable House to place them, as all militia surgeons heretofore were, on the permanent staff of their respective regiments.

"That should your Honourable House be willing to entertain such a proposition, the militia surgeons are convinced they can prove, before a Committee of your Honourable House, by statistical returns, that such a step not only secures the services of surgeons acquainted with military duties, but will be an act of justice, and, in a financial point of view, the most economical course the country can adopt."

A legal action, arising out of the transmissibility of constitutional syphilis from the child to the nurse, has lately been brought before the tribunal of the Seine. A woman named Dumas, being in perfect health, undertook in January 1857 to perform the duties of wet-nurse towards the child of Madame Perriraz, a widow. On taking charge of the infant (which was four months old), Mme. Dumas observed that it had an eruption on the face about the mouth, which she was assured by Dr. C., the medical attendant of the child, were of a simple nature. They, however, grew worse, and in a fortnight the nurse observed about her breasts an eruption, which increased, presenting the appearance of being syphilitic. M. Bonnet, a retired army surgeon, was now called in, and pronounced the child to be syphilitic, and to have infected the nurse. Madame Dumas then, by the advice of M. Bonnet, refused to nurse the child any longer. It ultimately died from syphilitic disease of the throat in September 1857. The defence set up was, that the child had not syphilis. The tribunal, however, on the grounds set forth in the indictment, and "because the health of the woman Dumas is for ever compromised," condemned Madame Perriraz to pay to the husband and wife Dumas the sum of *eight thousand francs* (£320), with interest, and to pay all costs.

A trial took place before Lord Campbell, on Saturday last, in which Mr. Steadman, an engineer residing at Walthamstow, sought to recover damages from Mr. Alfred Evans, a surgeon in the same place, for malicious arrest. It was stated in the evidence, that the plaintiff had received a severe injury on the Eastern Counties Railway. For this he had been professionally attended by the defendant; who, it was alleged, had "maliciously, and without reasonable cause, procured one of the judges to make an order that Mr. Steadman should be arrested and held to bail, by falsely representing that he was about to quit England." The plaintiff, it was further alleged, had been obliged to pay £108, and £10 in order to obtain his discharge. It was pleaded by the defendant, that he had been informed by the plaintiff's wife of his (plaintiff's) intention to leave the country: this, however, was denied by Mrs. Steadman. Lord Campbell said that the plaintiff appeared, from some points in the evidence, to have tried to evade payment of the debt; but the arrest was most improper, being a perversion of the law to obtain immediate payment. The jury found a verdict for the plaintiff—damages £20.

Association Intelligence.

ADMISSION OF MEMBERS, AND PAYMENT OF SUBSCRIPTIONS.

THE General Secretary of the British Medical Association begs to call the attention of members to the Laws regarding the ADMISSION of MEMBERS, and the PAYMENT of their SUBSCRIPTIONS.

"*Admission of Members.* Any qualified medical practitioner, not disqualified by any bye-law, who shall be recommended as eligible by any *three* members, shall be admitted a member at any time by the Committee of Council, or by the Council of any Branch."

"*Subscriptions.* The subscription to the Association shall be One Guinea annually; and each member, on paying his subscription, shall be entitled to receive the publications of the Association for the current year. The subscription shall date from the 1st January in each year, and shall be considered as due unless notice of withdrawal be given in writing to the Secretary on or before the 25th of December previous."

Either of the following modes of payment may be adopted:—

1. Payment by Post-Office Order to the Treasurer (Sir C. Hastings, M.D., Worcester), or to the undersigned.
2. Payment to the Secretary of the Branch to which the member belongs.
3. Members residing in the Metropolis and vicinity can make their payments through the publisher of the BRITISH MEDICAL JOURNAL, Mr. Thomas John Honeyman, 37, Great Queen Street, Lincoln's Inn Fields, W. C.

PHILIP H. WILLIAMS, *General Secretary.*

Worcester, January 1858.

SOUTH-EASTERN BRANCH:

SOCIAL AND SCIENTIFIC MEETINGS OF THE MEMBERS RESIDENT IN ROCHESTER, MAIDSTONE, GRAVESEND, AND THEIR VICINITIES.

A scientific and social meeting of members of the South-Eastern Branch resident in Rochester, Maidstone, Gravesend, and their vicinities, will be held on

Friday, March 12th, 1858, at 3.30 P.M., at the Guildhall, Gravesend.

The members resident in this district will be gratified by the attendance and assistance of any of the members of the British Medical Association.

All members of the South-Eastern Branch may attend these meetings, and be at liberty to introduce any professional friends.

Any member of the profession may, by permission of the Chairman, attend one of these meetings, subject to the rules of the Parent Society.

JAMES DULVEY, *Local Sec. pro tem.*

Bromptom, Chatham.

Reports of Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, January 26th, 1858.

Sir C. Locock, Bart., M.D., President, in the Chair.

VASCULAR TUMOUR IN THE ORBIT, OF MANY YEARS STANDING, AND LATTERLY PRODUCING THREATENING SYMPTOMS, SUCCESSFULLY TREATED BY THE INJECTION OF TANNIC ACID. BY HAYNES WALTON, ESQ.

A lady, aged 20, was sent to Mr. Walton by Mr. Square, of Plymouth, in 1856, on account of a vascular growth in the left orbit. The eyeball was prominent, and turned slightly upwards and outwards, restricted in motion, and incapable of being directed inwards. The lower eyelid bulged, and was slightly discoloured, especially towards the nose. By turning down the tarsal margin, there was exposed a growth, having the appearance of a congeries of veins attached to the eyeball, and which was evidently only a part of a larger mass. Pressure emptied it, the act producing pain, and redistension took place very slowly.

The chief subjective symptoms were, pain on the slightest exertion, and in extremes of temperature and during the catamenia; inability to lie down, in consequence of unpleasant sensations in the orbit and head; vision nearly extinct. The affection was congenital. Very soon after birth, slight swelling of the lower eyelid was discovered. At the age of 13, it attracted attention generally; and besides being larger, there was a bluish tint of the integuments. Reading or writing for some hours always caused temporary enlargement, and heightened the colour.

Mr. Walton diagnosed the tumour to consist chiefly of dilated and tortuous veins, and came to the conclusion that it was limited to the anterior and inner part of the orbit, and did not pass posteriorly. He resolved to treat it by the method of injection, and sought for an agent which might be safely used. Some experiments with the perchloride of iron caused him to reject it as unsuitable, from the tendency of the free acid which it contains to produce sloughing, or at least severe local action —a result to be avoided in such a situation. Ultimately, he determined to employ tannic acid, as an agent not possessing caustic properties, and one readily producing coagulation of the blood. A strong solution of this substance was thrown in with a syringe. There was rapid cessation of the hæmorrhage which followed the preliminary puncture, and the solidity of the tumour showed the extent of the coagulating action. Considerable swelling of the eyelid and chemosis of the conjunctiva ensued, accompanied with local pain and slight constitutional disturbance, but this was of short duration. A slight incision deemed necessary in the tumour was in a day or two followed by a dark-brown discharge. Later an abscess formed under the lower eyelid, and was evacuated by an external incision. The eyelid was long paralysed, but ultimately the movement completely returned. The discharge from the tumour continued for many weeks, varying in quantity, and several times pain and local irritation preceded the escape of fibrinous clots; and twice a small cretaceous mass was discharged.

When the patient left town, just three months after the commencement of the treatment, there was no longer any secretion from the seat of the disease or the abscess, and all trace of the tumour had long disappeared. The eyeball had fallen back nearly to the natural plane, although all its movements were not perfect. It could be directed downwards and outwards naturally, but not turned fully inwards, nor could it be raised to more than half its proper extent.

Mr. Dixon inquired whether tannic acid was superior to other injections. The termination of the case, by inflammation and abscess, was similar to what took place when alum and other solutions were employed.

Mr. R. Taylor said that inflammation, in Mr. Walton's case, was never so great as to require active treatment, nor to endanger the safety of the eyeball. From the satisfactory progress and termination of the case, he was induced to adopt the same kind of proceeding in a case that came under his care last summer. By the injection of half a grain of the saturated solution of alum, sufficient inflammation was induced to consolidate the globe and check the progress of the disease with safety to the parts.

Mr. T. S. Wells observed, that if a solution of perchloride of iron was of the specific gravity of 45 (French), coagulation would take place quickly; but if the specific gravity did not exceed 20 or 30, it would take ten or fifteen seconds to coagulate. It could then be used with ease in these cases, particularly if a proper instrument were employed. Mr. Wells sent round an ingenious instrument, invented by Mr. Gray, in which the canula, sharp and hard, acted as a needle. The syringe was of glass, and graduated; the piston could be screwed down until the canula was full; the canula was then passed into the tumour, and as many drops as were required injected into it. There was no fear of retardation in their passage through the tube. He had employed these instruments in several cases of nævi and varix with good results. In one instance, in which he thought the tumour was encephaloid, he had injected ten drops in four distinct punctures, and the growth was completely arrested.

Mr. Hulke had made a good many experiments with the perchloride of iron prepared according to the French formula. He had not experienced any difficulty from the coagulation of the fluid in the canula. He had found that when the solution was injected into the circulation of dogs, coagulation and death rapidly ensued. He had, during the last year, treated three cases of venous nævi of the eyelids with perchloride of iron by simply dipping a piece of silk in the solution and passing it through the tumour. Some suppuration was excited in the track of the thread, but the growth became solid without the production of any unpleasant effects in the course of two or three days.

Mr. Charles Hawkins mentioned the plan of treating cases of nævi by the introduction into them of a probe coated with nitrate of silver.

Mr. Haynes Walton considered that there was an advantage in the use of tannic acid over other agents, especially alum, to which he had alluded. It was not merely an irritant that was needed, but something more. The parts had already been submitted to much irritation during the first operation at Plymouth; indeed, the local action had been very severe, and yet the disease was not influenced. Something of a safe nature was needed to act on the contents of the tumour. He had latterly been employing tannic acid in nævi, and was much pleased with its effects. With regard to the use of the perchloride of iron in a diluted state, as mentioned by Mr. Wells, he still saw objection to it in a case like that under consideration. Although he had a strong suspicion that the tumour was limited to the anterior and internal part of the orbit, he was not sure that it did not pass behind the eyeball, or even extend further back, close to the brain; and under such doubt he was loth to use any remedy attended with the least risk. There was no novelty in the syringe shown by Mr. Wells; the instrument was well known and used in France. The method of treating nævi by threads dipped into a solution of iron, as described by Mr. Hulke, was old, and one that he had himself employed many times.

ON THE MEMBRANA DECIDUA WHICH SURROUNDS THE OVUM IN CASES OF TUBAL GESTATION. BY ROBERT LEE, M.D., F.R.S.

The author commenced this communication by citing various authorities to prove that the common opinion from the days of William Hunter to the present time was that the decidua, or outer surface of the secundines, belong to the uterus, and not to the ovary, or that part of the conception that is brought down from the ovary; and that in cases of extrauterine pregnancy, a deciduous membrane was still to be found in the cavity of the uterus.

But a case is recorded in the seventh volume of the *Medico-Chirurgical Transactions*, in which the uterus is stated to have been "considerably larger than we observe that organ to be in the unimpregnated state, even in women who have borne several children. On laying it open, the uterine vessels were observed to be very large but empty, and there was a great quantity of gelatinous matter in the cavity and neck of the uterus. When this was washed off, the internal surface of the viscus looked very vascular, having been highly injected; but there was not the least appearance of a decidua."

A second case is recorded in the seventeenth volume of the *Medico-Chirurgical Transactions*, in which the author himself was surprised at finding that "no organised deciduous membrane lined the cavity of the uterus, but the whole of it was coated with a thin layer of albumen." This case occurred in 1829, and the preparation was placed on the table of the Society in 1832; but until 1836, when another example of tubal gestation came under his observation, it does not appear that he made any attempt to determine whether the ovum in

the Fallopian tube was surrounded by decidua. The two preparations were then examined together, and a description of the appearances observed was published in the *Medical Gazette* for 1839-40. These cases, with four others which have subsequently come under his observation, were the subject of the present communication.

In Case I, on opening the tube, and examining the different parts of the ovum, he found a deciduous membrane everywhere surrounding the chorion, and closely adhering to the inner surface of the tube, as the decidua usually does to the lining membrane of the uterus. With the decidua, the chorion, amnion, and embryo were distinctly seen. The uterus was larger than natural, and there was no appearance of decidua lining its internal membrane.

In Case II, on carefully examining the ovum contained in the right Fallopian tube, it was evident that a deciduous membrane everywhere surrounded the chorion, and adhered to the inner surface of the tube. The placenta, which was situated at the extremity of the ovum nearest the uterus, was seen covered with the decidua, and coagula of the fibrine of the blood were traced from the interstices of the placenta through the decidua into veins in the thickened muscular coat of the tube. The uterus was considerably enlarged, and its inner surface was coated with a very thick layer of yellowish-white soft substance. There was no trace of any arterial or venous canal in this cavity.

In Case III, the fœtus had reached the age of six months, and was contained in a cyst which adhered to the omentum and intestines and to the surface of the uterus, and contained a great quantity of thin, fluid-like pus. The walls of the uterus were healthy, and the cavity empty. There was no decidua or substance of any kind coating its inner surface, but a decidua was attached to the placenta in the usual manner.

In Case IV, the greater part of the ovum had been removed, but still the decidua reflexa could be very distinctly seen covering a considerable portion of the villi of the chorion. In the uterus was found a coating of considerable thickness, and of a yellowish-white colour, in which neither arteries nor veins could be traced.

Case V was also one in which only a portion of the decidua was found in the tube.

In Case VI, the substance lining the cavity of the uterus resembled the fibrine of the blood, and was of a red colour at its upper part; where it had been detached from the surface of the uterus, the lining membrane presented a perfectly natural appearance. The embryo was inclosed in the amnion, with the vesicula umbilicalis remarkably large. The cells of the placenta and the villi of the chorion were distended with coagulated blood, and surrounded by deciduous membrane. By a careful dissection subsequently made, the decidua was found to consist of placental decidua, decidua vera and reflexa, with a decidual cavity.

An enumeration of the preparations in St. Bartholomew's and Guy's Hospital museums was appended, illustrating the pathology of Fallopian tube conception. In the former there are five examples, and of one of these the museum catalogue states that "the outermost membrane enclosing the fœtus has all the character of decidua. Besides this membrane, the amnion and chorion are distinct; the fœtus and umbilical cord are also perfect." In the opinion of the author, there could be no doubt that a decidua surrounds the ovum; and though none of the other preparations had been dissected with the view of ascertaining the point, yet in all the separation of the ovum from the inner surface of the tube has been carried to an extent sufficient to enable us to demonstrate the fact. There are thirteen preparations in Guy's Hospital museum. The author was permitted by Dr. Wilks, the conservator of the museum, to make a minute examination of the ovum in one of these, which had escaped entire through a rent in the Fallopian tube. He had the satisfaction not only to discover the vesicula umbilicalis, but to see the chorion completely surrounded by decidua, as in Case I. There could be no doubt that if the ova in these preparations were submitted to a similar examination, a decidua would be found in all, surrounding the ovum in the Fallopian tube. He did not wish to express an opinion on the nature of the membrane or substance found coating the inner surface of the uterus in the greater number of these preparations, which has been almost universally considered to be decidua since the days of Dr. William Hunter, although no bloodvessels in it have been discovered. His great object was to demonstrate the existence of a decidua around the ovum in cases of tubal gestation.

Dr. John Clarke drew attention to one of the specimens of tubal gestation before the Society. In the uterus which was laid open was what appeared to him a true deciduous membrane. There was the usual secretion in the glands in the neck of the uterus. Now, in the Fallopian tube there was no real deciduous membrane; there were only the fœtus, the amnion, and the chorion lying against the inner coat of the tube. He would not go so far as to say that in no case was a deciduous membrane formed round the ovum in tubal gestation; but cases in which a membrane existed, he considered as indications of the efforts of Nature to accommodate the parts to what to them was a perfectly new function. When the ovum had escaped from the ovary into the tube, it did not act as a foreign body by producing inflammation. Indeed, it was not a foreign body at all, but a living body intended by Nature to be matured and brought into the world. She therefore, as far as possible, accommodated the tube to the purposes of a uterus, a kind of deciduous membrane being thrown out. This membrane, whose function for a short time was to sustain the life of the ovum, was totally different in construction from the deciduous membrane of the uterus. In his (Dr. Clarke's) opinion, the preparations before the Society did not support the views of the author, for in almost all of them there was a deciduous membrane in the uterus; and in those cases where it was not found, the uterus was large, some uterine action had taken place, followed by the discharge of a membrane or fluid; that some deciduous membrane like that had escaped, was therefore not unreasonable to suppose.

Dr. Tyler Smith was not aware that any one had previously made such a special investigation of the decidua surrounding the ovum in cases of tubal gestation as the author of the paper, and in this respect it was valuable; but he believed Dr. Lee to be in error in supposing that modern authorities were not aware of the existence of a decidual membrane, or a membrane corresponding to the decidua, around the ovum in these cases. On this point the paper did not appear to add anything to that which was already known. He had, in his Lecture on Extra Utero Gestation, published in the *Lancet* in 1856, laid down precisely the same positions as those now advanced by Dr. Lee—namely, that in tubal gestation a decidua, or a membrane analogous to the decidua, is formed in the tube, and that a decidual membrane is generally, but not invariably, found in the uterus. After the microscopical researches which had been made into this subject, there could be no doubt that the decidua vera was the actual mucous membrane of the uterus, developed under the stimulus of conception for the reception and attachment of the ovum. The mucous membrane of the Fallopian tube resembled in some degree the mucous lining of the uterus, and it seemed natural that when the ovum became arrested in the tube, the mucous lining of that canal should behave like the mucous membrane of the uterus. There was nothing more extraordinary in this than in the fact, that while the ovum was being developed in the tube, the mucous membrane of the uterus should be developed to such an extent as to resemble the decidua, or that in cases of membranous menstruation, where no conception occurred, a close imitation of the decidua should often be produced.

The President recollected, when a student in Edinburgh, opening the body of a young woman who had died of small-pox. During the examination, it was ascertained that she was the subject of extrauterine fœtation. The ovum appeared to be a transparent cyst, attached by a neck to the Fallopian tube, and floating amongst the intestines above the brim of the pelvis. When it was opened, it was examined with care; no decidua, nor anything like it, was to be seen. There were the fœtal part of the ovum, the true fœtal membranes, and the regular coat of the Fallopian tube itself. The uterus contained a deciduous membrane, not organised, since the ovum had never been there. In many of Dr. Lee's cases a somewhat similar membrane had been present. He (Sir C. Locock) thought that the grand difference in these cases might be explained by the gradation of pregnancy. In normal pregnancy, Hunter's theory was no doubt correct; but in extrauterine fœtation a membrane was formed which had never been properly developed, because there was no necessity for it. The case was considered by some like that of menstruation, which some regarded as a kind of imperfect pregnancy. There was a representation, in Hooper *Morbid Anatomy*, of the interior of the uterus of a woman who died accidentally during menstruation; the lining membrane was similar to that observed in the uterus when pregnancy occurred in the Fallopian tube. The explanation, therefore, he considered, was this, that when the ovum did not reach the uterus, the membrane of the uterus was never a perfect one; but as the ovum could not reach maturity

without having a substitute for the membrane in which it was formed, he agreed with Dr. Tyler Smith in his opinions as to this formation, which, however, he should regard rather as a factitious than as a true deciduous membrane.

MEDICAL SOCIETY OF LONDON.

Saturday, January 23rd, 1858.

Edwin Canton, Esq., Vice-President, in the Chair.

EFFECT OF ABSORPTION OF LACTIC ACID ON THE HEART. BY W. BRINTON, M.D.

Dr. Brinton reminded the Society that, at a meeting a few weeks before, when Dr. Richardson brought forward his recent interesting experiments on the results of the absorption of lactic acid into the blood upon the valves of the heart, he (Dr. Brinton) had mentioned his having assisted Mr. Simon in precisely similar experiments, with similar results, about eleven years ago. Since that meeting he had casually mentioned the subject to Mr. Simon, who found that he had in his possession some water-colour drawings of the cardiac appearances, which had at that time been executed by Dr. J. G. Westmacott with his usual fidelity. By the kindness of Mr. Simon, he was enabled to lay these drawings before the Society. They showed the mitral and aortic valves studded with a series of beads of semi-transparent lymph. Dr. Brinton believed that Mr. Simon had, in some of his writings, alluded to these experiments in general terms, but had not specified the details of the cardiac changes which he had thus brought about.

DEAFNESS ACCOMPANYING CHRONIC RHEUMATIC ARTHRITIS. BY W. HARVEY, ESQ.

Mr. Harvey explained the dissection he had made of the temporal bones of a patient who had recently died, and who had been for years affected with chronic rheumatic arthritis of the larger articulations. The patient had suffered from deafness, which could be accounted for by a morbid deposition apparent in the ossicles, these being closely matted together, and changed as to their position. This was a type of a class of cases of great interest, inasmuch as he (Mr. Harvey) was convinced, from long experience, that the disease may be easily diagnosed in the living, and that then the treatment was obvious. The deafness, although considerable, in most cases yielded to a judicious use of such medicines as were applied to the affections of the larger joints of the body. He had long discontinued blistering, syringing, and other routine practices, which generally left the patient in the same or a worse condition, in favour of one that was constitutional and more adapted to the pathology of the case. The disease, although incident to old age, he had seen in patients under twenty. He was inclined to believe that this morbid change was not one of anchylosis so called, but of the same deposition as occurs in the larger articulations.

Mr. Canton said the observations of Mr. Harvey were highly valuable, as, although he had never examined the ossicula auditûs himself in this disease, he had, years ago, when investigating these morbid changes in the larger articulations, suggested that a similar appearance in the small bones of the ear might often explain deafness.

Mr. Hinton showed a temporal bone, taken from a child who had died from croup, in which the tympanum was found filled with caseous matter, and the Eustachian tube obstructed. He bore testimony to Mr. Harvey's pathology of the class of deafness to which he had alluded, arising from rheumatism and gout; but he thought the same appearances were often observed in ordinary inflammation of the ear.

FATTY DEGENERATION. BY J. L. W. THUDICHUM, M.D.

The first part of the communication was devoted to a historic examination of fatty degeneration, or the change of animal tissues into various abnormal products and fat. The appearances of fat have misled the microscopists, as, according to the author, when the heart or other muscular parts become changed into fat, no one has asked for the other elements of this metamorphosis. Fat anywhere, or anyhow, under the microscope, oil globules or fat cells, at once assumed the name of "degeneration," till the latter has become a dogma of our weekly medical literature. Weak and fatty heart as contra-indicating chloroform, etc., the author observed, had become "household words" of the profession; he had every reason to doubt, however, that fatty degeneration, so called, was a degeneration or change of anything into fat. He did not believe cholesterine or adipocere were fats the result of degeneration, or that the former was a fat at all. Fat is scarcely likely to be produced from changes in albumen. Several forms of fat, pathologically speaking, fat in the liver, fat in the heart, etc. (often very different), as well as fat in overfed animals, are all huddled together as "degeneration," but fat tissues must be separated from inorganic fat. The entire fat of the body is about 10 per cent. of its weight; it can be separated in various ways, more than one of which were detailed. The origin of all the fat in the body is to be traced to starchy and hydrocarbonaceous food, but, according to the most reliable researches, never to albumen. The paper next described, in detail, some experiments conducted by Dr. Weber, in which a comparison was instituted, by weight and measure, of the amount of actual fat, separated by chemical reagents, in some specimens of healthy heart-tissue, and the fat recoverable from pieces of diseased heart in other patients, said to be far advanced in the so-called fatty "degeneration," as shown by the fibres exhibiting the usual vesicles, refracting light, the fibres easily torn and soft, etc.; but in no case was there as much actual fat in the latter as in the former, where there was something like 3 per cent. of chemical fat in healthy muscular fibre, while it only amounted to 1 and 9-10ths in the fibres so saturated with oil-globules.

Another very interesting series of cases was also given, of acute disease with fat in the liver. A child was affected with diarrhœa of an intractable kind. Fat was found in the fæces; the liver was fatty, which prevented it from secreting bile; the acid contents of the stomach were thus deprived of the neutralising agency of bile; irritation of the duodenum and ileum supervened, ending in dysentery and death. In another case, also, one of paralysis, with, perhaps, emboli in the brain, and also acute or active symptoms. The liver was one-fourth, or 25 per cent., composed of fat. The author, in conclusion, said he wished to state the facts; they were difficult of explanation; the paper was like Dr. Livingstone's work, an inroad into a new and strange territory, and if any want of system occurred in his remarks, it was more immediately due to the confusion existing between chemists and microscopists.

Dr. Headland said that he had gained but a very confused idea of the tendency of the author's argument. He defended the labours of the microscopists, and pronounced the crucible to be as much exposed to sources of fallacy as the microscope.

Dr. Hyde Salter thought the ideas of the author were very clear, and that there were many points of interest and importance in the paper. He would be glad to know why the author excluded cholesterine from the list of fats; and he sought an explanation of the readiness with which fatty granules were formed in the kidneys and other textures after death.

Dr. Routh agreed with many of the author's conclusions, but he questioned the soundness of some of them. He alluded more particularly to the formation of wax by bees fed on sugar, and of fat by animals fed on food not containing fatty matter, and to the conversion of fat into adipocere.

Dr. Quain thought that the subject was more easy of comprehension than the paper read seemed to imply. The cases of diseased heart, for example, described by the author showed a marked and most important pathological change. Ether, blotting-paper, and the greased scalpel showed the presence of fat in such instances. The microscope but confirmed these and other tests, and demonstrated fatty granules pervading the texture. These granules came as the result of impaired nutrition, from the unloosening, as it were, of the elementary substances composing the heart's texture. Fat and albumen, by their union in food, constituted the first step in nutrition; all textures were made up of these elements, and they reappeared as the first step in degeneration or decay. They were the alpha and omega of animal life. The fatty granules in fatty degeneration were derived from fat already in the texture, but in another form. It was not necessary, therefore, that more fat should be found in a texture in a state of fatty degeneration; but not seeing how less fat could be found than in the healthy state, he believed that in some of the cases described by the author an error existed.

Dr. Thudichum replied to the observations which had been made, and explained, amongst other points, that cholesterine partook more of the characters of an alcohol than of a fat.

Saturday, January 30th, 1858.

Francis Hird, Esq., President, in the Chair.

SOME POINTS CONNECTED WITH THE TREATMENT OF OBSTINATE STRICTURE OF THE URETHRA. BY HENRY SMITH, ESQ.

The author commenced by defining the term "obstinate" in

reference to stricture, and referred to three forms of the disease where this obstinacy obtained. The first was where the main source of distress to the patient and difficulty for the surgeon existed in the excessive irritability of the urethra, which would not allow of treatment to be carried on satisfactorily by ordinary means. In the second class of cases, the stricture was marked chiefly by its density, and by the periurethral condensation of the parts to the perinæum and scrotum, accompanied occasionally with fistulous openings. In addition, also, there might be the extreme irritability associated with the first form of stricture: if so, the surgeon would have to deal with a most difficult case. In the third form of the disease, the author referred to those cases of stricture which were entirely caused by injury to the perinæum, which occurred at the earliest periods of life, and which were especially marked by extreme density of the parts, and rebelled generally against ordinary treatment.

For the treatment of these cases, which, in the more severe forms, so often baffled the ordinary means employed, Mr. SMITH considered that much more might be done than is at present. In the first kind of case, where the stricture was accompanied by extreme irritability of the parts, great attention must be paid to preparatory measures for some days before local treatment is commenced; entire rest, freedom from all stimuli, careful attention to the various secretions; and when these were improved, the liberal administration of opium, were the means administered. When the system had become less irritable, dilatation was to be commenced; but when there were, as is often the case, two or more strictures, and those excessively narrow, the treatment by the use of metallic catheters and sounds has to be specially avoided, as much irritation is caused by them in severe cases; whilst in others the patients will not allow them to be used a second time. Wax bougies, however, when well made and skilfully used, could be employed without producing irritation, and dilatation could be carried on up to a certain point where no other instrument would effect it. The objections urged against the wax bougie as an unreliable instrument were not founded upon good evidence. It was, however, only in the early stage of treatment that Mr. Smith used the wax bougie; for as soon as a fair sized bougie could be introduced, he went on with the treatment by using metal instruments. When, from the excessive irritability of the urethra, dilatation could not be proceeded with, the author strongly advocated the use of potassa fusa, as employed by Mr. Wade, applied very lightly, and detailing a case illustrating the benefits of that agent in a great degree.

In the second form of the disease, preparatory treatment was of great avail; but here the periurethral thickening should be reduced by applications of leeches from time to time, by continual fomentations and poulticing. Then, instead of forcing a small catheter through the tight obstruction, the author recommended that a fair-sized solid sound or catheter should be passed down to the face of obstruction, and held against it for some time. If these and other measures failed, the potassa fusa was to be applied more freely than in the first kind of cases referred to.

In the third form, where the stricture was traumatic, the surgeon would have great trouble. Fortunately, however, there was little irritability in such cases, and therefore the surgeon might employ his measures somewhat more freely. Retention of the catheter and the potassa fusa were the agents to be relied upon.

The author considered at some length the action and use of potassa fusa, and spoke highly of it as an adjuvant to other treatment, but strongly deprecated its frequent or free employment. He detailed some cases in support of his views, and concluded his paper by some observations on the treatment of obstinate forms of stricture by incisions. He considered cutting as a remedy for stricture as bad in principle, and believed that a cure could not be effected by it more than by any other measure. Cases related by surgeons and in hospital reports hitherto could not be relied on, as the history of the patients was generally only brought down to a few weeks from the operation. Years were necessary before a proper appreciation of cutting could be made. Mr. Smith detailed the particulars of two or three cases, where cutting had been performed years previously, and where the results, at first satisfactory, were ultimately quite the contrary.

Mr. MILTON considered the views of the author regarding the treatment of the obstinate forms of stricture to be correct, and although he had never used potassa fusa, he should, after what he had heard from Mr. Smith, most certainly try it.

Mr. ROBARTS corroborated the statement of the author respecting a case in which he (Mr. Robarts) had requested Mr. Smith's assistance. The patient was in a most deplorable condition, and he thought that it would be a fit case for tapping the bladder by the rectum; but Mr. Smith suggested the use of potassa fusa, and the results were most satisfactory. In three applications the bladder was reached, and in a few weeks the urethra was fully dilated.

Mr. JABEZ HOGG suggested the employment of chloroform in the kind of cases related by the author.

Mr. PRICE was anxious to ascertain from the author whether stricture did not return after the use of potassa fusa as after any other measure. He thought Mr. Smith condemned cutting operations too freely; he had seen some very good results, but at the same time he had witnessed some most lamentable occurrences from them.

Mr. CANTON considered the views of the author respecting the use of wax bougies as sound. He liked them very much in obstinate cases of stricture. He thought Mr. Smith wrong in attributing to the front of the bulb and the bulb itself the seat of stricture. He believed that, notwithstanding the views of Mr. Smith, originally propounded at this Society, had been accepted by the profession, the membranous part was the most frequent seat.

ROYAL INSTITUTION.

FRIDAY, FEBRUARY 5TH, 1858.

THE DRINKING WATER OF THE METROPOLIS.

BY EDWIN LANKESTER, M.D., F.R.S.

AFTER pointing out the necessity of water to the organisation of both plants and animals, Dr. LANKESTER quoted several instances in which the state of the drinking waters had led to disease. He drew attention more particularly to the difference between the numbers attacked by cholera in Lambeth in 1848 and 1854, and showed that, according to Dr. Snow's inquiries, this entirely depended on one of the water companies supplying Lambeth having obtained, between the years 1848 and 1854, a supply of water higher up the Thames. He also referred to the death by cholera produced by the Broad Street pump and the recent outbreak of cholera at West Ham, which was undoubtedly connected with drinking pump water. The case of two children in St. James's, Westminster, was referred to, who invariably became ill of diarrhœa on returning to their residence in London, and got well on going into the country. On inquiry, they were found to have been drinking from one of the street pumps in the neighbourhood, and got well on ceasing to drink this kind of water. In all these cases the waters had become injurious from the possession of *organic* constituents. The drinking waters of London are supplied from the Thames and the New River, and from wells. The river water is the same, but a great difference is found in water from wells. From the deep wells which are made into the chalk, either in London or the neighbourhood, the saline matter was large, whilst the organic matter was small; but in the *surface wells*, those penetrating only through the gravel or into the clay under London, both saline and organic matters were abundant.

The *inorganic* or saline matters of all these waters to which attention was drawn, were as follows.

1. *Carbonate of Lime.* This rendered water *hard;* and though insoluble, was suspended by the action of carbonic acid gas. It existed in the Thames, the deep wells, and the surface wells. In the latter, it existed in large quantities, from the solvent power of the carbonic acid gas derived from the decomposition of organic matters. The carbonate of lime is thrown down by the addition of lime-water, which unites with the carbonic acid which holds the carbonate in solution. This is Dr. Clark's softening process. It not only softens the water, but throws down the organic matters, and is essentially a purifying process. It might and ought to be applied to all Thames water supplied for drinking purposes.

2. *Sulphate of Lime.* This substance exists in small quantities in all London waters, and attention was drawn to it on account of the decomposition it undergoes under the influence of organic matters producing sulphuretted hydrogen. It is one cause of the ready putrescence of waters in which it exists.

3. *Chloride of Sodium.* This substance exists in large quantities in the well-water, and in very small quantities in the Thames. Its presence in the latter might be due to the tide from the sea; in the deep wells it was washed out of the chalk, but in the surface wells it could come from no other source than the refuse of human habitations.

4. *Ammonia.* This substance exists also in small quantities

in Thames water, but still in as large quantity as in a water impregnated with one part in ten of sewage matter. It exists in larger quantities in surface wells, and is absent in deep well water. It evidently arises from the decomposition of animal and vegetable matter, and indicates the impurity of the water in which it is found. By oxidation, ammonia becomes converted into nitric acid, and this acid, combined with potash, soda, and lime, is found in abundance in some of the surface wells of London.

The lecturer next adverted to the nature of the organic constituents of the water of London. He pointed out the unsatisfactory nature of all chemical attempts at estimating these products. In the process of boiling or evaporating, a large quantity of organic matters escaped in a volatile form. Large, then, as was the quantity of organic constituents discovered by the chemist, they were only a part; the microscope alone revealed the extent of organic matters in water; they are either dead or living. The *dead* consists of portions of animal or vegetable bodies in a state of decay, frequently indicating the source from whence they came. Thus, in the Thames and surface wells, undigested food had been clearly demonstrated. The *living* organisms consisted of plants and animals. Of plants, various forms of *Diatomaceæ*, *Desmideæ*, *Confervæ*, and *Fungi* were found. These were not in themselves injurious, but they were only produced as the result of impurity. Some Confervæ, as the *calothrix nivea*, only grew in the midst of sulphuretted hydrogen. The *fungi* were especially characteristic of impure water from dark wells. The lecturer had detected fungi in several surface well waters, which had produced disease in those who drank them. (*Quarterly Journal of Microscopical Science*, vol. iv, p. 270.) Organic matters had been found by Mr. Noad and Dr. Medlock to act on lead. The latter chemist believed that this was in all cases produced by the formation of a nitrate of lead, which being acted on by carbonic acid, gave up its lead in the form of a carbonate, which being thrown down, left it free to act again upon fresh lead. In the case of water obtained from melted ice, it was found, however, that it acted on lead, although no organic matter could have been present.

The means of purifying water were considered, and experiments on filtration through animal and vegetable charcoal, sand, sponge, and rock, exhibited. It was shown, according to Dr. Medlock's suggestion, that iron was one of the most powerful purifiers of water. Water was exhibited thus purified, and contrasted with that which was not so prepared. The difference was striking, as the one was green with vegetation and the other quite pure.

The lecturer concluded by urging the necessity of closing all surface well pumps, recommending that Thames water be boiled and filtered before drinking, and pointing out the deep well waters as the only source of uncontaminated water for drinking purposes.

Editor's Letter Box.

THE BITE OF THE TSETSE: ARSENIC SUGGESTED AS A REMEDY.

Letter from James Braid, Esq.

Sir,—Of the various interesting facts communicated to us in Dr. Livingstone's valuable *Missionary Travels and Researches in South Africa*, one of the most notable is his narrative of the remarkable and fatal phenomena manifested in oxen and sheep from the bite of the *tsetse*, which is so perfectly harmless in man and *wild* animals, and even calves, so long as they continue to suck the cows.

On reading the narrative, it immediately occurred to me that it would be highly interesting to institute some experiments with the view of discovering a remedy for this curious and fatal malady; and my mind immediately reverted to the prophylactic powers of arsenic against the poison of the most venomous reptiles, as set forth by Dr. Honigberger, in his work *Thirty-five Years in the East*. In the above work, at pages 134-7, the Doctor narrates the case of a faqueer, who, in the presence of himself and a scientific friend, allowed himself to be bitten by a poisonous viper without the slightest injury, but a bite of which inflicted on a fowl immediately afterwards issued in the death of the bird. The same man was imprisoned next night, and brought up in fetters to be exhibited before Shere Sing, in proof of the power possessed by him of allowing serpents to bite him with impunity. In his way hither, as if by way of bravado, the faqueer, to demonstrate his power to a friend whom he accidentally met, at once untied the pot which contained his two vipers, and caused himself to be bitten by one of them. On this occasion, the result was, that "scarcely had he advanced two steps when he staggered and fell. But he summoned all his strength, and rose again, in order to proceed, but again fell; and, not being able to rise a second time, a charpi (stretcher) was brought, to convey him from the bazaar to my (Dr. Honigberger's) house. He was followed by a multitude of curious people; and I caused him to be taken into a neighbouring stable, belonging to the faqueer Chirakooddeen, who went immediately to see the patient, as he was then vomiting blood. Chirakooddeen was of opinion that he would never recover; and the injured faqueer being a Brahmin, he wished me to send him to a termsale (an Indian temple), in order to avoid the unpleasant consequences which might attend his death; but, on mentioning this intention to the patient, he preferred being sent to a friend of his, who was living at the town called Shaburg, where he himself had previously resided; which was accordingly done..... On the same day, the faqueer had a swelling on his knee, and diarrhœa; but he soon recovered, and afterwards proved very useful to me, when I began to make my experiments with the serpents, which produced so many curious results that I sacrificed upwards of two hundred fowls in less than six months."

But now comes the most interesting part of the narrative, and which has suggested to me the idea of Dr. Livingstone or others trying the prophylactic influence of arsenic in the disease above referred to, as resulting from the bite of the *tsetse*.

"The faqueer really possessed the secret of preventing his blood being affected by the bites of venomous reptiles; and, having at length succeeded in obtaining his statement, I now present it to the public. The faqueer was an arsenic-eater, and to this reason he ascribed the cause of his remaining unaffected by any serpent's venom. Perhaps he was right, because in India arsenic is an ingredient in various compositions which are recommended as remedies against the bites of serpents. He told me, that during his stay under my control, he could not procure the poison, and that was the reason why the viper's bite affected him, which might possibly have been the case."

Such is the source from which I have derived the idea of giving small doses, such as half a grain or more, of arsenic to oxen bitten by the *tsetse*. As the disease is invariably mortal to them, as far as at present known, I should think it well worthy of a trial; and, if it proves successful, this communication will not have been in vain.

I am, etc., James Braid.

Rylaw House, 212, Oxford Street, Manchester, Feb. 6th, 1858.

P.S. I have known one or two grains of white arsenic given to a horse daily for some time with marked benefit. J. B.

[Dr. Livingstone has assured us that he will, if possible, attend to the suggestion of our correspondent when an opportunity offers in his forthcoming expedition. Editor.]

PUBLIC PROSTITUTION.

Sir,—In reply to Mr. Acton, I beg to show him a bogie or two taken out of the cupboard; and very slimy horrible bogies they are to my way of thinking, and I imagine to that of "the public," upon whose fears, Mr. Acton says, I have attempted to operate on by "infantile intimidation." The cupboards in which these bogies were shut up were, in the first instance, in Berlin, and in the second, in Rome.

I wish, however, sir, particularly to draw your attention to the remarkable fact that the descriptions of the bogies, as Mr. Acton calls them, are taken from his own book on Prostitution!

I am, etc., F.R.C.S.

Bogie No. 1. "The town (Berlin) has been repeatedly purged since the Reformation, but has as often immediately fallen a prey to desertion of infants, adultery, abortions, and clandestine prostitution."

"In 1796, a strong and successful attempt at suppression by the religious party induced the old result of increased disease and secret vice." And again, in 1845, the same thing occurred. (p. 87.)

Bogie No. 2. In Rome, "prostitution is nominally prohibited." "Its resorts are proscribed, and so continually

hunted from point to point, in compliance with no written law, by arbitrary authority, that scarce a dozen houses can contrive to lurk within the limits of the Roman police jurisdiction..... But the reverse of this pleasing show of external propriety shows clandestine prostitution, with its inevitable concomitants, depravation of morals and wide diffusion of intense disease, has invaded domesticity itself." (p. 90.)

Parliamentary Intelligence.

HOUSE OF LORDS.—Monday, February 8th.

ARMY SANITARY COMMISSION.

Lord PANMURE laid on the table the Report of the Commissioners to inquire into the Sanitary Condition of the Army. The report was most voluminous; but he could assure their lordships that it would well repay perusal. It reflected the highest possible credit on the commissioners who drew it up; and he could not forbear from expressing the sense he entertained of the services of those gentlemen, and more especially that of his right honourable friend Mr. Sidney Herbert, who presided over the commission. [*Hear, hear.*]

THE THAMES.

On the motion of Earl ST. GERMANS, the report of Mr. Goldsworthy Gurney to the First Commissioner of Works, on the Purification of the Thames, which had been presented to the other House of Parliament, was ordered to be laid on the table.

HOUSE OF COMMONS.—Monday, February 8th.

MORTALITY IN THE ARMY.

Mr. LAURIE gave notice that on Thursday he should ask the Under Secretary of War what steps were to be taken to remedy the great mortality in the army, especially in the Foot Guards quartered in the metropolis, disclosed by the lately published report.

MAIN DRAINAGE OF THE METROPOLIS.

Sir B. HALL moved for copies of a letter from the Metropolitan Board of Works, and of a further report of the referees upon the main drainage. Ordered.

Medical News.

BIRTHS, MARRIAGES, DEATHS, AND APPOINTMENTS.

In these lists, an asterisk is prefixed to the names of Members of the Association.

BIRTHS.

BRINTON. On February 9th, at 20, Brook Street, Grosvenor Square, the wife of *William Brinton, M.D., of a son.

FINCH. On February 5th, at Stainton Lodge, Blackheath, the wife of Robert Finch, M.D., of a daughter.

MARRIAGES.

LEWIS—ELWYN. LEWIS, the Rev. Lewis Woodward, youngest son of D. Lewis, M.D., of Finsbury Place, to Louisa Anne Edie, eldest daughter of Colonel Elwyn, Royal Artillery, at Waresley, Huntingdonshire, on February 9th.

NICHOLLS—PIGOTT. NICHOLLS, Lucius, Esq., Surgeon, to Amy Ann, second daughter of the late David Wray Pigott, Esq., of Stoke Newington, at St. James's Church, Holloway, on February 4th.

SALTER—CLARK. *SALTER, Thomas Bell, Esq., M.D., F.R.S., of Ryde, Isle of Wight, to Mary Ann, second daughter of John Clark, Esq., formerly H.B.M's. Consul at Bilboa, at All Saints' Church, Southampton, on February 6th.

TAYLOR—TAYLOR. TAYLOR, Henry S., Esq., Surgeon, of Guildford, to Sophia Russel, youngest daughter of the late Colonel J. W. Taylor, Bengal Army, at Shalford, near Guildford, on February 3rd.

WILLIAMS—LE CREN. WILLIAMS, Isaac Mennell, Esq., only son of *Caleb Williams, M.D., of York, to Henrietta, second daughter of the late James Jaumard le Cren, Esq., of London, at York, on February 4th.

DEATHS.

BIRD. On February 5th, at Swansea, Mary, wife of *George Gwynne Bird, M.D.

*BROWN, Robert, Esq., Surgeon, of Preston, aged 57, on February 1st.

COUCHER. On January 25th, at Weymouth, Mary Jane, wife of Robert Coucher, M.D.

EVERINGHAM, Henry, Esq., Surgeon, at Wareham, Dorset, aged 80, lately.

LILLIES. On February 5th, at Alphington, near Exeter, aged 66, Fanny, widow of the late George Frederick Lillies, Esq., Surgeon R.N.

MARTIN. About June 10th last, in Oude, killed by the mutineers, Lieutenant Norman Alexander Martin, 7th Bengal Light Cavalry, aged 19, son of *J. Ranald Martin, Esq., of Grosvenor Street, London.

NORGATE, B. H., Esq., Surgeon, of Norwich, aged 55, at Hastings, on February 8th.

PITMAN. On February 2nd, aged 2 years and 3 months, Alfred, only son of Henry Alfred Pitman, M.D., of 28, Montague Place, Russell Square.

PRICHARD, Thomas, Esq., Surgeon, of Sidcup, Foot's Cray, Kent, aged 60, on February 4th.

SNELL. On or about June 3rd, at Seetapore, Oude, shot by the mutineers, aged 24, Helen Johnson, wife of Lieutenant George Snell, 10th Regiment Oude Native Infantry, and youngest daughter of the late Samuel Davis, M.D., of Cheltenham.

APPOINTMENTS.

HAWKINS, Charles, Esq., appointed Inspector of Anatomy in the room of John Bacot, Esq., resigned.

KING, H. Staveley, B.A., M.D., elected Physician to the Metropolitan Free Hospital.

PASS LISTS.

ROYAL COLLEGE OF SURGEONS. FELLOWS admitted at a meeting of the Council, on Thursday, February 11th:—

CARTER, Henry Freeland, Brighton: diploma of membership dated April 15th, 1842
DAVEY, Henry William Robert, Worthing: Dec. 3rd, 1819
ESSERY, Thomas Aubrey, Swansea: May 22nd, 1839
JONES, Thomas Stead, Ely: May 17th, 1811
HADEN, Francis Seymour, Sloane Street: June 27, 1842
HALL, Edward, Dalton in Furness: February 27th, 1829
LOCKHART, William, Shanghae: April 29th, 1834
LOWE, Wm. Thomas, Canonbury Square: July 30th, 1830
MORGAN, Howel, Dyfynog, Brecon, S. Wales: Aug. 26, 1842
PEGGE, John, Manchester: April 1, 1842
RODEN, William, Kidderminster: November 25th, 1842.
ROWLANDS, James, Carmarthen: May 20th, 1842
SMITH, Robert William, Winchester: June 6th, 1834
STEDMAN, Silas Stilwell, Brighton: January 14th, 1842
WOOD, William, Wakefield: June 25, 1842
WYBRANTS, Jonathan, Shepton Mallet: August 27th, 1839

APOTHECARIES' HALL. Members admitted on Thursday, February 4th, 1858:—

EVERET, Wilton, Arundel, Sussex
HARRIS, Abraham, Gwennap, Cornwall
WRIGHT, Richard Stonhower, Croydon
USHER, Thomas Stevenson, Ilkley

HEALTH OF LONDON:—WEEK ENDING FEBRUARY 6TH, 1858.

[*From the Registrar-General's Report.*]

THE total number of deaths in London, which in the previous week was 1363, was in the week that ended last Saturday (February 6th) 1314. In the ten years, 1848-57, the average number of deaths in the weeks corresponding with last week was 1211, but as the deaths of last week occurred in an increased population, these should be compared with the average, when the latter has been raised in proportion to the increase, in which case the comparison will show that the mortality of last week approximated very closely to that which former experience leads to expect in the first week of February.

Of the 1314 deaths in the present return, 1303 are referred each to the fatal disease or injury, with sufficient distinctness to admit of arrangement under the several heads in the nosological list. The special diseases and orders of disease are classified under five general heads; viz., the zymotic class,

which was fatal last week in 241 cases, the corrected average of corresponding weeks (in 1848-57) being 299; the constitutional, which was fatal in 248 cases, whilst the average was 263; the local, to which 622 deaths are placed, the average being 557; the developmental, fatal in 160 cases, the average 155; and violence, which caused 32 deaths, the average being 27. Measles, in the first class, carried off 57 children and hooping-cough 51; with these exceptions the deaths referred to zymotic complaints are comparatively few; small-pox and diarrhœa, for example, number only 3 and 8 respectively; cholera none; typhus (with continued fever) 32, its average being 58. Hence the comparatively favourable result, as shown above, under the head of zymotic diseases. In the "local" class of diseases the case is reversed. Bronchitis, which belongs to this class, carried off last week 228 persons, whilst under the average mortality of the disease, at this period, the number would have been 145; and it is due to the prevalence of this disease that the mortality from all causes is maintained so near the average amount. It should be observed that both phthisis and pneumonia were rather less fatal than usual. Nine nonagenarians died last week, all of whom were women except two: one was 91 years of age, one 92, 4 were 95, one 96, one 97, and one 98.

The disease "diphtheria" is recorded in two instances. And it will be seen, unfortunately, in the notes, that three lives were lost from want of the necessaries of life.

Last week, the births of 910 boys and 932 girls, in all 1842 children, were registered in London. In the ten corresponding weeks of the years 1848-57, the average number was 1598.

At the Royal Observatory, Greenwich, the mean height of the barometer in the week was 29·738 in. The *highest* reading was 29·94 in. on Saturday. The mean temperature of the week was 37·8°, which is very near the average of the same week in 43 years (as determined by Mr. Glaisher). The mean daily range of temperature was 11·4. The *highest* temperature occurred on Friday, and was 52.8°; the *lowest* on Tuesday, which was 26.3°. The difference between the mean dew point temperature and air temperature was 4°. The mean temperature of the water of the Thames was 38·6°, nearly a degree higher than that of the air. The mean humidity of the air was 89. On Tuesday and three following days the wind was mostly in the south-west. The amount of rain with melted snow was 0.77 in. in the week. On Tuesday snow began to fall at 11 o'clock A.M., and continued till 5 P.M. On that as well as the preceding day the mean temperature was considerably below the average.

EAST INDIA COMPANY'S SERVICE.

QUESTIONS PUT AT THE EXAMINATION FOR ASSISTANT-SURGEONS. JANUARY 11TH AND 12TH, 1858.

Anatomy and Physiology. Examiner, Mr. Busk. 1. Describe fully the structure, functions, and relations of the sympathetic system of nerves; noticing its minute anatomy. 2. A line being drawn from the symphysis of the lower jaw along the lower border of the ramus, another along the anterior border of the sterno-mastoid muscle, and a third from the symphysis of the lower jaw to the upper border of the sternum in the mesial line; describe the parts contained within the triangle thus formed. 3. Enumerate the excrementitious substances met with in the human subject, and describe the sources whence they are derived, and the various modes in which they are eliminated from the system; noticing more particularly the chemical composition and character of urea, and the mode of procedure for its detection when present is the blood. 4. Describe the human blood and the changes it undergoes when removed from the course of circulation, both within and without the body; noticing the circumstances by which its coagulation is affected in either case respectively. 5. Describe the different regions into which the abdomen is divided, and enumerate the parts contained in each. 6. Describe the peculiarities of the mucous membrane in the different portions of the alimentary canal, commencing at the mouth. 7. Define the following terms:—Reflex action, centripetal impression, complementary nutrition, homologous organs or parts.

Medicine. Examiner, Dr. Walshe. 1. Describe the anatomical characters and mode of progress of circumscribed (or nodular) apoplexy of the lung. What are its symptoms and physical signs; and what the diseases of which it is a recognised effect? 2. What are the signs of enlarged spleen? Point out the differences in the enlargement, according as it occurs in fevers,—in leucohæmia,—and in organic diseases of the viscus itself. 3. Describe the course and symptoms of uncomplicated measles. 4. What are the premonitory symptoms, actual phenomena, and immediate sequelæ of an apoplectic seizure, depending on cerebral hæmorrhage? 5. Comment on the prognosis, immediate and remote, in—(*a*) a first attack of rheumatic pericarditis; (*b*) acute morbus Brightii. 6. Enumerate the more striking characters of the urine in—(*a*) chronic pyelitis (inflammation of the mucous membrane of the infundibula and pelvis); (*b*) severe chorea; (*c*) chronic cystitis; (*d*) saccharine diabetes. 7. Give the symptoms, signs, modes of spontaneous termination and diagnosis of abscess in the iliac fossa (unconnected with parturition). 8. How would you treat—(*a*) congestive menorrhagia; (*b*) poisoning by corrosive sublimate; (*c*) eczema impetiginodes of an extremity; (*d*) angina pectoris? [Write prescriptions in Latin, without using abbreviations, for any two of the drugs you may recommend.]

Surgery. Examiner, Mr. Paget. 1. Describe hæmorrhoids, external and internal, in their ordinary and their inflamed states; and the plans of treatment, palliative and curative, appropriate for each kind. In this and other cases write prescriptions for whatever medicines you would recommend. 2. Describe the most frequent appearances of infantile syphilis, and the appropriate treatment. 3. Describe the scrofulous, or tuberculous, disease of the testicle, tracing it through its several stages; and state, especially, the characters by which you would distinguish it from syphilitic disease, common chronic inflammation, and gonorrhœal inflammation of the same organ. 4. What are the principal points to which your attention would be directed in selecting a site for a general hospital? Would you, or would you not, in such an hospital, appropriate separate wards to cases of accidents, operations, and certain diseases? State reasons for whichever plan you would adopt. 5. What are the chief marks of distinction between gonorrhœal rheumatism and common rheumatism, and the chief consequences to which the former disease may lead? 6. Describe briefly the principal varieties of dislocation of the humerus, and the characters by which each may be distinguished from (1) fracture through the anatomical neck of the humerus; (2) fracture through the surgical neck; (3) fracture of any part of the scapula. 7. Describe a carbuncle, in the several stages of its progress, when not subjected to any active local treatment. 8. What are the general and the minute characters of "fibrous tumours" of the uterus? What changes do they usually produce in the uterus when they grow (1) in the mid-substance of its walls; (2) near its cavity, at the fundus; (3) in or near the vaginal portion of the cervix? What is the corresponding disease in the male?

Natural History. Examiner, Dr. Hooker. (Answer five or more of the following questions.) 1. Describe in general terms the structure and functions of leaves; in what respect are they analogous to those of bark. 2. Give examples of active principles being present in the bark and leaves of the same plants, but absent or rare in their other organs; upon what peculiarities of structure may this depend? 3. What are the principal modifications of inflorescence? Give examples. 4. What are the structure and functions of pollen; how is it developed, and how does it act on the ovule? 5. The term fruit includes different organs when applied to the apple, nut, plum, strawberry, pine-apple, and fig; what are the organs common to all, and what are peculiar to each of these? 6. What are sago, tapioca, arrowroot, tous-les-mois, manioc, and revalenta; what plants produce them, and how are they procured from those plants? 7. What are the milk, meat, shell, eyes, husk, and coir of the cocoa-nut? define them botanically. 8. What is diastase? give examples of its action during the life of plants; and of its importance in an economic point of view. 9. What are the principal animal, vegetable, and mineral acrids or irritants, and what their sources? 10. What are the principal oceanic currents; and how do any of them influence the climates of the great continents? 11. How do the climates of the east and west coasts of England differ; and what causes the differences? 12. How would you obtain a frigorific mixture artificially?—how, and under what circumstances may you be able to make ice when the temperature of the air is above 32°? 13. Describe in general terms an electrical machine and a galvanic battery: explaining the principles upon which they are constructed. 14. What are the general principles upon which the science of geology is based? 15. Describe shortly the reproductive organs of birds, fish, insects, and arachnida. 16. What animals produce sponge, honey, coral, cuttle-fish bone?—and what are these several substances? 17. Describe in general terms the development of the feathers of a bird, the shells of a chelonian, mollusc, and crustacean, and

the scales of a fish. 18. Define the terms archetype, vital action, organic function, animal function, absorption, assimilation, and sensation.

The examination terminated on Saturday, January 16th; there were thirty-seven candidates; three of these gentlemen retired on the first day. Appointments have been obtained by fifteen.

TO CORRESPONDENTS.

POSTAGE OF MANUSCRIPT AND PRINTED MATTER.

Any amount of manuscript or printed matter, singly or together, provided it contains nothing in the form of a letter, is transmitted through the post, in packets *open at the ends*, at the following rates: not exceeding 4 ounces, one penny; above 4 and not exceeding 8 ounces, twopence; above 8 ounces and not exceeding 1 pound, fourpence; for every additional half-pound or under, twopence.

Members should remember that corrections for the current week's JOURNAL should not arrive later than Wednesday.

NOTICE.—DR. WYNTER will feel obliged if the Associates will address all Post Office Orders in payment of Subscriptions, to the Publisher, Mr. THOMAS JOHN HONEYMAN, 37, Great Queen Street, Lincoln's Inn Fields, London, W. C., "Bloomsbury Branch"; and he would also feel obliged by their sending all communications respecting the non-receipt of the Journal, to the same address; as both these matters are out of the province of the Editor.

TO CONTRIBUTORS. The Editor would feel glad if Members of the Association and others, would cooperate with him in establishing as a rule, that in future no paper for publication shall exceed two pages of the Journal in length. If the writers of long communications knew as well as the Editor does, that lengthy papers *always* deter the reader from commencing them, this great evil would never arise. Brevity is the soul of medical writing—still more than of wit.

ANONYMOUS CORRESPONDENTS should always enclose their names to the Editor; not for publication, but in token of good faith. No attention can be paid to communications not thus authenticated.

Communications have been received from:—MR. T. T. GRIFFITH; MR. W. SIMPSON (York); MR. GAMGEE; MR. W. HOBSON; MR. JOSEPH JOHNSON; MR. BEECROFT; MR. F. H. WATTS; DR. ROUTH; MR. T. HOLMES; DR. DAVEY; MR. JAMES BRAID; DR. W. O. MARKHAM; MR. JOSEPH WARD; DR. LANKESTER; SIR CHARLES HASTINGS; MR. CHARLES YOUNG; MR. JAMES JONES; MR. W. F. FAVELL; DR. JOHN SLOANE; MR. THOMAS SMITH; DR. M. COUCHER; MR. T. M. STONE; MR. HOLMES COOTE; DR. CAMPS; and MR. R. FREEMAN.

BOOKS RECEIVED.

[* *An Asterisk is prefixed to the names of Members of the Association.*]

1. On some of the more Obscure Forms of Nervous Affections: their Pathology and Treatment. With an Introduction on the Physiology of Digestion and Assimilation, and the Generation and Distribution of Nerve Force, based upon Original Microscopical Observations. By Harry William Lobb, L.S.A., M.R.C.S.E. London: John Churchill. 1858.
2. Rheumatism: its Nature, Causes, and Cure. Gout: its Nature, Causes, Cure, and Prevention. By James Alexander, M.D. London: John Churchill. 1858.

ADVERTISEMENTS.

Kamala—a Powder obtained from the Capsules of ROTTLERA TINCTORIA.

Recommended as a Remedy for Tape-worm. Dose, ½ drachm to 2 drachms. See *Medical Times and Gazette*, May 2 and December 19, 1857.

ALLEN & HANBURYS have a supply of the above-named Medicine, price to Members of the Profession, 1s. per oz., if by post, 1s. 4d.

TINCTURE OF KAMALA, dose 2 to 3 drachms, price 1s. per ounce.

LONDON: PLOUGH COURT, LOMBARD STREET, E.C.

TO ADVERTISERS.

British Medical Journal.— Office, 37, GREAT QUEEN STREET, LINCOLN'S INN FIELDS, LONDON, W.C.

The Journal of the British Medical Association is published every Saturday, and is transmitted direct from the Office to between Two and Three Thousand Members of the Association in all parts of the United Kingdom.

SCALE OF CHARGES FOR ADVERTISEMENTS.

Seven lines and under	£0	4	0
Every additional line	0	0	6
A whole column	2	15	0
A page	5	0	0

Advertisements ought to be delivered and paid for at the Office on the Thursday preceding publication; or if not paid for at the time should be accompanied by a respectable reference.

Post-Office Orders, "Bloomsbury Branch," are to be made payable to THOMAS JOHN HONEYMAN (the Publisher), 37, Great Queen Street, Lincoln's Inn Fields, London, W. C.

Great Reduction in the Prices of NEW MEDICAL GLASS BOTTLES and PHIALS, at the Islington Glass Bottle Works, Islington Place, Park Road. WAREHOUSE—2, Upper Copenhagen Street, Barnsbury Road, Islington, London, N. E. & H. HARRIS beg to submit the following prices for quantities not less than Six Gross, assorted to suit the convenience of the purchaser.

6 and 8 oz., any shape, plain, or graduated		8s. 0d.	per gross.
3 and 4 oz.	ditto ditto	7s. 6d.	„
½ oz. White Moulded Phials		4s. 6d.	„
1 oz.	ditto	5s. 6d.	„
1½ oz.	ditto	6s. 0d.	„
2 oz.	ditto	7s. 0d.	„

No remittance required until the Goods are received. Packages free. Delivered free within seven miles. Immediate attention to country orders. Post-office Orders made payable to E. & H. HARRIS, at the Chief Office, London.

Bankers—Union Bank of London.

Williams and Son's Pure Glycerine SOAP, analysed by Dr. HOFMANN, F.R.S., and PROFESSOR REDWOOD, Ph.D., strongly recommended by many eminent Members of the Medical Profession, and favorably noticed by the following Medical Journals.

The *Lancet*.
The *Medical Times and Gazette*.
The *British Medical Journal*.
The *Medical Circular*.
The *Edinburgh Medical Journal*.
The *Dublin Hospital Gazette*.

It is suited to all cases of delicate skin (whether arising from disease or otherwise), and is admirably adapted for nursery use. May be had of all respectable Chemists, Perfumers, etc.

SOAP WORKS, CLERKENWELL, LONDON, E.C

DR. DE JONGH'S

LIGHT-BROWN COD-LIVER OIL.

This pure transparent LIGHT-BROWN COD-LIVER OIL is invariably and carefully submitted to Chemical Analysis, and, to preclude any subsequent admixture or adulteration, is supplied ONLY in Bottles, capsuled and labelled with DR. DE JONGH'S Stamp and Signature, so that the Faculty may rely upon a genuine Medicine, and, so far as is possible, anticipate a uniform, regular, and certain result.

Sole Consignees and Agents for the United Kingdom and the British Possessions,

ANSAR, HARFORD, & CO., 77, STRAND, LONDON.

HALF-PINTS (10 Ounces), 2*s.* 6*d.*

PINTS (20 Ounces), 4*s.* 9*d.* QUARTS (40 Ounces), 9*s.*

IMPERIAL MEASURE.

*** A LIBERAL DISCOUNT TO THE PROFESSION.

India-rubber Urinals for Male and FEMALE RAILWAY TRAVELLERS, INVALIDS, and CHILDREN Manufactured by SPARKS and SON, Patent Surgical Truss and Bandage Makers, 28, Conduit Street, London, W.

The above Urinals are made on the most approved principles, and are all fitted with the recently-invented valve, which will not allow any return of the water by the upper part, by being placed in any position, and from their improved construction are better than any similar articles at present in use.

A liberal discount to the Medical Profession. Descriptive Circulars and Lists of Prices sent per post.

Hospitals, Infirmaries, & Unions supplied on the best terms with every article for the use of the sick and invalided.

URINAL FOR TRAVELLING. URINAL FOR BED USE.